# STIC Search Report
## Biotech-Chem Library

STIC Database Tracking Number: 117637

| | |
|---|---|
| **TO: Ralph J Gitomer**<br>**Location: 3d65 / 3e71**<br>**Saturday, March 27, 2004**<br>**Art Unit: 1651**<br>**Phone: 272-0916**<br>**Serial Number: 09 / 950052** | **From: Jan Delaval**<br>**Location: Biotech-Chem Library**<br>**Rem 1A51**<br>**Phone: 272-2504**<br><br>**jan.delaval@uspto.gov** |

## Search Notes

JAN

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

# SEARCH REQUEST FORM 117637

Requestor's Name: R GITOMER Serial Number: 09/950,052

Date: 3/24/04 Phone: 70916 Art Unit: 1651

5C71

**Search Topic:**

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

JAN

1-8

## STAFF USE ONLY

Date completed: 3/27/04

Searcher: Jan

Terminal time:

Elapsed time: 15 + UC

CPU time:

Total time:

Number of Searches:

Number of Databases:

**Search Site**

- ✓ STIC
- CM-1
- Pre-S

**Type of Search**

- N.A. Sequence
- A.A. Sequence
- Structure
- ✓ Bibliographic

**Vendors**

- IG Suite
- ✓ STN
- Dialog
- APS
- Geninfo
- SDC
- DARC/Questel
- Other

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 14:47:56 ON 27 MAR 2004
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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES:   26 MAR 2004  HIGHEST RN 668260-95-5
DICTIONARY FILE UPDATES:  26 MAR 2004  HIGHEST RN 668260-95-5

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d ide can tot

L55  ANSWER 1 OF 7  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   41107-82-8  REGISTRY
CN   D-Mannitol, 2,5-anhydro- (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   2,5-Anhydro-D-mannitol
CN   NSC 129241
FS   STEREOSEARCH
DR   50896-35-0
MF   C6 H12 O5
CI   COM
LC   STN Files:   ADISINSIGHT, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS,
       BIOSIS, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN,
       CSCHEM, MEDLINE, MSDS-OHS, PROMT, TOXCENTER, USPAT2, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources:   EINECS**
         (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.
```

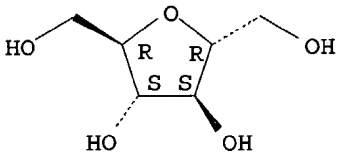


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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

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               1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             137 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE   1:  139:320863

REFERENCE   2:  139:320862
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REFERENCE 3: 137:216815

REFERENCE 4: 136:391093

REFERENCE 5: 136:385453

REFERENCE 6: 136:385452

REFERENCE 7: 136:226811

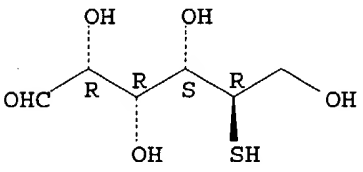
REFERENCE 8: 136:6291

REFERENCE 9: 135:371920

REFERENCE 10: 135:103982

L55 ANSWER 2 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **20408-97-3** REGISTRY
CN D-Glucose, 5-thio- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 5-Thio-D-glucose
CN 5-Thioglucose
CN NSC 204984
CN Thioglucose
FS STEREOSEARCH
DR 119663-50-2
MF C6 H12 O5 S
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, NIOSHTIC, PROMT, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).

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243 REFERENCES IN FILE CA (1907 TO DATE)
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243 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:307935

REFERENCE 2: 139:272794

REFERENCE 3: 139:226553

REFERENCE 4: 139:138761

REFERENCE 5: 138:398052

REFERENCE 6: 138:336528

REFERENCE 7: 138:328924

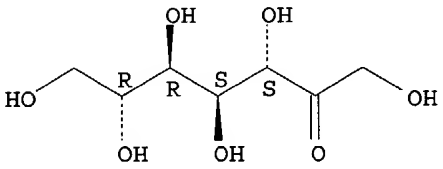
REFERENCE 8: 138:117243

REFERENCE 9: 137:292772

REFERENCE 10: 136:243380

L55 ANSWER 3 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **3615-44-9** REGISTRY
CN D-manno-2-Heptulose (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN D-manno-Heptulose (7CI, 8CI)
OTHER NAMES:
CN (+)-Mannoheptulose
CN D-Mannoheptulose
CN NSC 226836
FS STEREOSEARCH
MF C7 H14 O7
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, MRCK*, NAPRALERT, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

184 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
184 REFERENCES IN FILE CAPLUS (1907 TO DATE)
19 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:362696

REFERENCE 2: 136:366839

REFERENCE 3: 136:181555

REFERENCE 4: 136:132017

REFERENCE 5: 136:114970

REFERENCE 6: 135:342070

REFERENCE 7: 135:177554

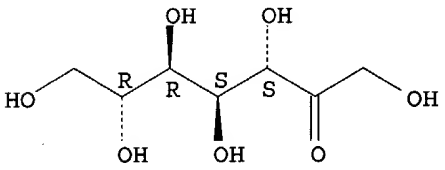
REFERENCE 8: 135:72838

REFERENCE 9: 134:363244

REFERENCE 10: 134:277431

L55 ANSWER 4 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **654-29-5** REGISTRY
CN manno-2-Heptulose (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN manno-Heptulose (6CI, 7CI)
OTHER NAMES:
CN Mannoheptulose
CN Mannoketoheptose
FS STEREOSEARCH
MF C7 H14 O7
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, DDFU, DRUGU, EMBASE, MEDLINE, NAPRALERT, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Relative stereochemistry.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

181 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
181 REFERENCES IN FILE CAPLUS (1907 TO DATE)
26 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:73584

REFERENCE 2: 139:336204

REFERENCE 3: 138:362696

REFERENCE 4: 138:276265

REFERENCE 5: 138:185376

REFERENCE 6: 137:138593

REFERENCE 7: 136:292792

REFERENCE 8: 136:229463

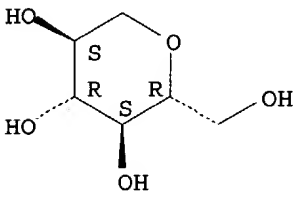
REFERENCE 9: 136:226811

REFERENCE 10: 135:357274

L55 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **154-58-5** REGISTRY
CN D-Glucitol, 1,5-anhydro- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN D-Glucose, 1-deoxy- (7CI)
CN Glucitol, 1,5-anhydro-, D- (8CI)

CN Polygalitol (6CI)
OTHER NAMES:
CN 1,5-Anhydro-D-glucitol
CN 1,5-Anhydroglucitol
CN 1,5-Anhydrosorbitol
CN 1-Deoxy-D-glucopyranose
CN Aceritol
FS STEREOSEARCH
MF C6 H12 O5
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, EMBASE, IPA, MEDLINE, NAPRALERT, PROMT, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

416 REFERENCES IN FILE CA (1907 TO DATE)
10 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
416 REFERENCES IN FILE CAPLUS (1907 TO DATE)
15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:192246

REFERENCE 2: 140:89679

REFERENCE 3: 139:336204

REFERENCE 4: 139:195239

REFERENCE 5: 139:95200

REFERENCE 6: 139:81454

REFERENCE 7: 138:321501

REFERENCE 8: 138:86132

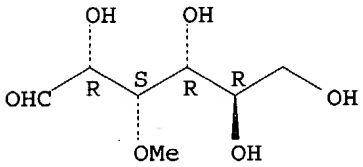
REFERENCE 9: 138:22987

REFERENCE 10: 138:21451

L55 ANSWER 6 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **146-72-5** REGISTRY
CN D-Glucose, 3-O-methyl- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:

CN 3-O-Methyl-D-glucose
CN 3-O-Methylglucose
CN NSC 170119
FS STEREOSEARCH
DR 27948-57-8
MF C7 H14 O6
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE, IPA, MEDLINE, NIOSHTIC, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

1786 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1787 REFERENCES IN FILE CAPLUS (1907 TO DATE)
30 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:192132

REFERENCE 2: 140:174770

REFERENCE 3: 140:124157

REFERENCE 4: 140:90784

REFERENCE 5: 140:40009

REFERENCE 6: 140:25861

REFERENCE 7: 140:14924

REFERENCE 8: 140:13277

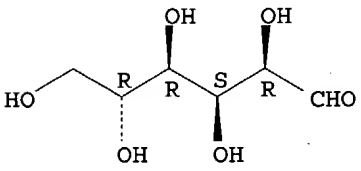
REFERENCE 9: 139:369668

REFERENCE 10: 139:350900

L55 ANSWER 7 OF 7 REGISTRY COPYRIGHT 2004 ACS on STN
RN **50-99-7** REGISTRY
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN (+)-Glucose
CN Anhydrous dextrose
CN Cartose
CN Cerelose
CN Cerelose 2001
CN Clearsweet 95
CN Clintose L

CN Corn sugar
CN CPC hydrate
CN D(+)-Glucose
CN Dextropur
CN Dextrose
CN Dextrosol
CN Glucodin
CN Glucolin
CN Glucose
CN Glucosteril
CN Goldsugar
CN Grape sugar
CN Maxim Energy Gel
CN Roferose ST
CN Staleydex 111
CN Staleydex 130
CN Staleydex 333
CN Sugar, grape
CN Tabfine 097(HS)
CN Vadex
FS STEREOSEARCH
DR 8012-24-6, 8030-23-7, 162222-91-5, 165659-51-8, 50933-92-1, 80206-31-1
MF C6 H12 O6
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

165362 REFERENCES IN FILE CA (1907 TO DATE)
2183 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
165549 REFERENCES IN FILE CAPLUS (1907 TO DATE)
14 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:226212

REFERENCE 2: 140:223315

REFERENCE 3: 140:223309

REFERENCE 4: 140:223308

REFERENCE 5: 140:223306

REFERENCE 6: 140:223304

REFERENCE 7: 140:223173

REFERENCE 8: 140:223081

REFERENCE 9: 140:222751

REFERENCE 10: 140:222520

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 14:48:05 ON 27 MAR 2004


FILE COVERS 1907 - 27 Mar 2004 VOL 140 ISS 14
FILE LAST UPDATED: 26 Mar 2004 (20040326/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all hitstr tot l54

L54 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:376385 HCAPLUS
DN 138:362696
ED Entered STN: 16 May 2003
TI Method for normalizing insulin levels
IN Chapnick, David I.; Chapnick, Linda G.
PA Quality Vitamins, Inc., USA
SO U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-7012
ICS A61K031-198
NCL 514053000; 536123130; 514566000
CC 1-10 (Pharmacology)
Section cross-reference(s): 11, 17, 63
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2003092669 | A1 | 20030515 | US 2002-280332 | 20021025 |
| PRAI | US 2001-343576P | P | 20011026 | | |

AB The invention is directed to a dietary supplement which contains **mannoheptulose.** **Mannoheptulose** occurs naturally in avocado fruit and is prepared by ethanolic extraction The dietary supplement and its method of use can lower serum insulin levels and lower a subject's weight

The dietary supplement in its disclosed form includes a controlled release system for **mannoheptulose.** The dietary supplement may also include one or more amino acids. A group of overweight male human subjects was administered enteric-coated D-**mannoheptulose** and L-glutamic acid. Enterically-coated **mannoheptulose** proved to be effective short-term and longterm, in lowering elevated serum insulin without inducing hyperglycemia.

ST normalizing insulin blood **mannoheptulose** controlled release; avocado **mannoheptulose** dietary supplement wt control

IT Fruit
(avocado; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT Body weight
(control of; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT Drug delivery systems
(delayed release, oral; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT Amino acids, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(dietary supplements containing **mannoheptulose** and; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT Drug delivery systems
(enteric-coated; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT Avocado
(fruit; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT Hyperglycemia
(insulin lowering without induction of; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT Body weight
(loss; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT Blood serum
Human
(**mannoheptulose** from avocado for normalizing serum insulin levels)

IT Drug delivery systems
(oral, controlled-release; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT Drug delivery systems
(oral, sustained release; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT Carbohydrates, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(reduction in craving for; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT Diet
(supplements; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT 9004-32-4, Carboxymethylcellulose
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(for controlled-release system; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT 64-17-5, Ethanol, uses
RL: NUU (Other use, unclassified); USES (Uses)
(**mannoheptulose** extraction with; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT **50-99-7**, D-**Glucose**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**mannoheptulose** from avocado for normalizing serum insulin

levels)

IT **654-29-5P, Mannoheptulose**
RL: BSU (Biological study, unclassified); FFD (Food or feed use); NPO (Natural product occurrence); PAC (Pharmacological activity); PUR (Purification or recovery); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
(**mannoheptulose** from avocado for normalizing serum insulin levels)

IT **3615-44-9**, D-**Mannoheptulose**
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(method for normalizing insulin levels)

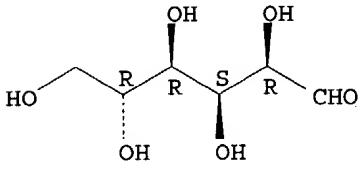
IT 56-84-8, L-Aspartic acid, biological studies 56-86-0, L-Glutamic acid, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(oral dosage form containing **mannoheptulose** and; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT 9004-10-8, Insulin, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(serum levels; **mannoheptulose** from avocado for normalizing serum insulin levels)

IT **50-99-7**, D-**Glucose**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**mannoheptulose** from avocado for normalizing serum insulin levels)

RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

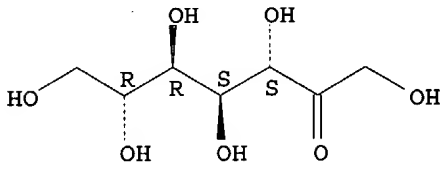
Absolute stereochemistry.




IT **654-29-5P, Mannoheptulose**
RL: BSU (Biological study, unclassified); FFD (Food or feed use); NPO (Natural product occurrence); PAC (Pharmacological activity); PUR (Purification or recovery); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
(**mannoheptulose** from avocado for normalizing serum insulin levels)

RN 654-29-5 HCAPLUS
CN manno-2-Heptulose (8CI, 9CI) (CA INDEX NAME)

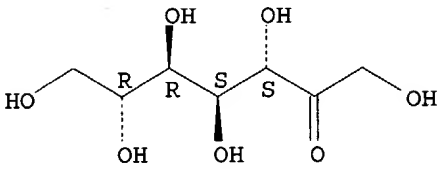
Relative stereochemistry.




IT **3615-44-9**, D-**Mannoheptulose**
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(method for normalizing insulin levels)

RN 3615-44-9 HCAPLUS
CN D-manno-2-Heptulose (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L54 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2002:221205** HCAPLUS
DN **136:226811**
ED Entered STN: 22 Mar 2002
TI Mimicking the metabolic effects of **caloric** restriction by administration of **glucose** antimetabolites
IN **Pitha, Josef; Roth, George**
PA USA
SO U.S. Pat. Appl. Publ., 4 pp., Cont.-in-part of U. S. Ser. No. 889,877, abandoned.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-70
NCL 514023000
CC 1-11 (Pharmacology)
Section cross-reference(s): **17**

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI US 2002035071 | A1 | 20020321 | US 2001-950052 | 20010912 <-- |
| PRAI US 1997-889877 | B2 | 19970708 <-- | | |

AB A method of obtaining beneficial biol. results associated with caloric restriction may be gained by administration of a composition containing at least one active agent which blocks metabolism of **glucose** as a source of energy in cells in **glucose** metabolism blocking effective amts. to an animal in need thereof.

ST caloric restriction **glucose** antimetabolite anhydrosugar

IT Dog (Canis familiaris)
**Hypothermia**
(mimicking metabolic effects of caloric restriction by administration of **glucose** antimetabolites)

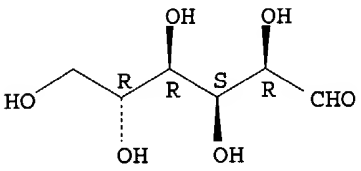
IT **50-99-7**, D-**Glucose**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antimetabolites; mimicking metabolic effects of caloric restriction by administration of **glucose** antimetabolites)

IT **146-72-5**, **3-O-Methylglucose**
**654-29-5**, **Mannoheptulose** **20408-97-3**, **5-Thio-D-glucose** **41107-82-8**, **2,5-Anhydro-D-mannitol**
RL: PAC (Pharmacological activity); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(mimicking metabolic effects of caloric restriction by administration of **glucose** antimetabolites)

IT **50-99-7**, D-**Glucose**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antimetabolites; mimicking metabolic effects of caloric restriction by administration of **glucose** antimetabolites)

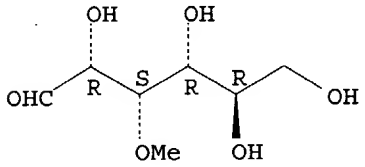
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



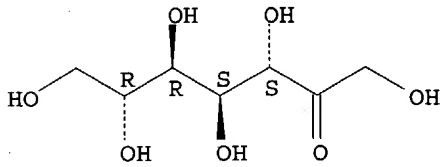
IT **146-72-5, 3-O-Methylglucose**
**654-29-5, Mannoheptulose 20408-97-3, 5-Thio-D-glucose 41107-82-8, 2,5-Anhydro-D-mannitol**
RL: PAC (Pharmacological activity); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(mimicking metabolic effects of caloric restriction by administration of **glucose** antimetabolites)
RN 146-72-5 HCAPLUS
CN D-Glucose, 3-O-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



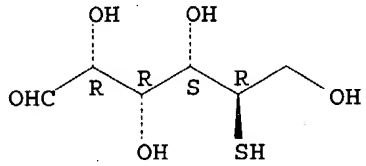
RN 654-29-5 HCAPLUS
CN manno-2-Heptulose (8CI, 9CI) (CA INDEX NAME)

Relative stereochemistry.



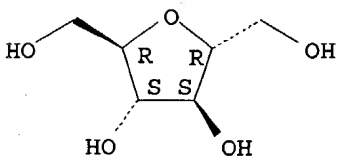
RN 20408-97-3 HCAPLUS
CN D-Glucose, 5-thio- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 41107-82-8 HCAPLUS
CN D-Mannitol, 2,5-anhydro- (9CI) (CA INDEX NAME)

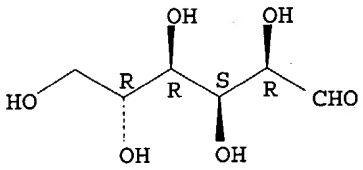
Absolute stereochemistry.




L54 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1997:673613** HCAPLUS
Correction of: **1997:136175**
DN **127:276458**
Correction of: **126:223818**
ED Entered STN: 24 Oct 1997
TI Clinical significance of serum **1,5-anhydroglucitol** measurement in **diabetes** mellitus
AU Liu, Jie; Hu, Ling; Cheng, Ruiying; Xue, Xuehua; Shao, Jinkang; Kang, Shuzhen; Duan, Aixiang; Han, Guilan
CS Shanxi Provincial People's Hospital, Taiyuan, 030012, Peop. Rep. China
SO Shanxi Yiyao Zazhi (**1996**), 25(6), 415-416
CODEN: SIYCDB; ISSN: 0253-9926
PB Shanxi Yiyao Zazhi Bianjibu
DT Journal
LA Chinese
CC 14-8 (Mammalian Pathological Biochemistry)
AB Serum **1,5-anhydroglucitol** was determined by using the pyranose oxidase method in 153 diabetes, 15 impaired **glucose** tolerance patients and 30 healthy adults in comparison with fast plasma **glucose**, HbA1c, and fructosamine. **1,5-Anhydroglucitol** was significantly decreased in patients with increased fast plasma **glucose**, and was closely neg. correlated with fast plasma **glucose**, HbA1c and fructosamine. **1,5-Anhydroglucitol** was more sensitive than the HbA1c. The results suggest that serum **1,5-anhydroglucitol** is a useful index in monitoring blood **glucose** control in diabetics.
ST serum **anhydroglucitol glucose** marker diabetes mellitus
IT Blood serum
Diabetes mellitus
(**1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)
IT **50-99-7**, D-**Glucose**, biological studies 4429-04-3
62572-11-6, Hemoglobin A1c
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(**1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)
IT **154-58-5**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(**1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)
IT **50-99-7**, D-**Glucose**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(blood; **1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)
IT **50-99-7**, D-**Glucose**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

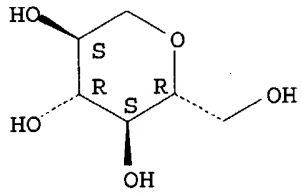
BIOL (Biological study); OCCU (Occurrence)
(**1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



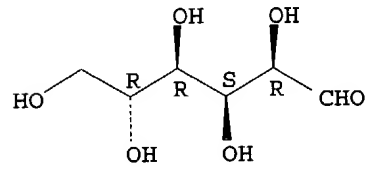

IT **154-58-5**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(**1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)
RN 154-58-5 HCAPLUS
CN D-Glucitol, 1,5-anhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).




IT **50-99-7**, D-**Glucose**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(blood; **1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

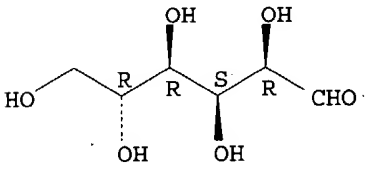
Absolute stereochemistry.




L54 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1997:667645** HCAPLUS
Correction of: **1996:339525**
DN **127:260983**
Correction of: **125:30982**
ED Entered STN: 22 Oct 1997
TI **Diabetes** mellitus and **1,5-anhydroglucitol**

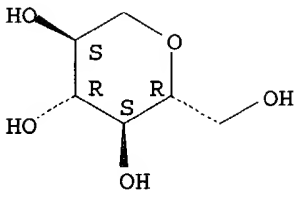
AU Liu, Jie
CS Shandong Provincial People's Hosp., Taiyuan, 030012, Peop. Rep. China
SO Shanxi Yiyao Zazhi (**1995**), 24(5), 310-311
CODEN: SIYCDB; ISSN: 0253-9926
PB Shanxi Yiyao Zazhi Bianjibu
DT Journal; General Review
LA Chinese
CC 14-0 (Mammalian Pathological Biochemistry)
AB A review, with 9 refs., covering the structural similarity with **glucose**, the metabolism in the normal condition and in diabetes, clin. significance of determination of **1,5 anhydroglucitol**, and its characteristics in the use as an index of blood **glucose** control in diabetes.
ST review **anhydroglucitol** diabetes blood sugar control
IT Diabetes mellitus
(blood sugar control monitoring in diabetes mellitus via **1,5-anhydroglucitol**)
IT **50-99-7**, **Glucose**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(blood sugar control monitoring in diabetes mellitus via **1,5-anhydroglucitol**)
IT **154-58-5**, **1,5-Anhydroglucitol**
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); PROC (Process); USES (Uses)
(blood sugar control monitoring in diabetes mellitus via **1,5-anhydroglucitol**)
IT **50-99-7**, D-**Glucose**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(blood; blood sugar control monitoring in diabetes mellitus via **1,5-anhydroglucitol**)
IT **50-99-7**, **Glucose**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(blood sugar control monitoring in diabetes mellitus via **1,5-anhydroglucitol**)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



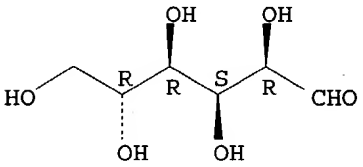

IT **154-58-5**, **1,5-Anhydroglucitol**
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); PROC (Process); USES (Uses)
(blood sugar control monitoring in diabetes mellitus via **1,5-anhydroglucitol**)
RN 154-58-5 HCAPLUS
CN D-Glucitol, 1,5-anhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT **50-99-7**, D-**Glucose**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(blood; blood sugar control monitoring in diabetes mellitus via **1,5-anhydroglucitol**)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L54 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1997:136175** HCAPLUS
DN **126:223818**
ED Entered STN: 01 Mar 1997
TI Clinical significance of serum **1,5-anhydroglucitol** measurement in **diabetes** mellitus
AU Liu, Jie; Hu, Ling; Cheng, Ruiying; Xue, Xuehua; Shao, Jinkang; Kang, Shuzhen; Duan, Aixiang; Han, Guilan
CS Shanxi Provincial People's Hospital, Taiyuan, 030012, Peop. Rep. China
SO Shanxi Yiyao Zazhi (**1996**), 25(6), 415-416
CODEN: SIYCDB; ISSN: 0253-9926
PB Shanxi Yiyao Zazhi Bianjibu
DT Journal
LA Chinese
CC 14-8 (Mammalian Pathological Biochemistry)
AB Serum **1,5-anhydroglucitol** was determined by using the pyranose oxidase method in 153 diabetes, 15 impaired **glucose** tolerance patients and 30 healthy adults in comparison with fast plasma **glucose**, HbA1c, and fructosamine. **1,5-Anhydroglucitol** was significantly decreased in patients with increased fast plasma **glucose**, and was closely neg. correlated with fast plasma **glucose**, HbA1c and fructosamine. **1,5-Anhydroglucitol** was more sensitive than the HbA1c. The results suggest that serum **1,5-anhydroglucitol** is a useful index in monitoring blood **glucose** control in diabetics.
ST serum **anhydroglucitol glucose** marker diabetes mellitus
IT Blood serum
Diabetes mellitus
(**1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)
IT **50-99-7**, **Glucose**, biological studies 4429-04-3, Fructosamine 62572-11-6, Hemoglobin A1c
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

BIOL (Biological study); OCCU (Occurrence)
(**1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)

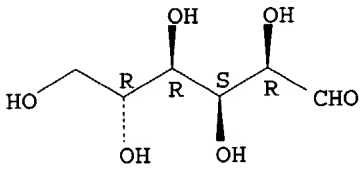
IT **154-58-5**, **1,5-Anhydroglucitol**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(**1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)

IT **50-99-7**, D-**Glucose**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(blood; **1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)

IT **50-99-7**, **Glucose**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(**1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)

RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

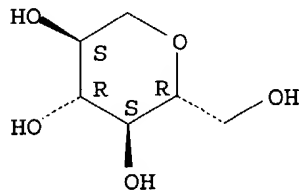
Absolute stereochemistry.




IT **154-58-5**, **1,5-Anhydroglucitol**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(**1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)

RN 154-58-5 HCAPLUS
CN D-Glucitol, 1,5-anhydro- (9CI) (CA INDEX NAME)

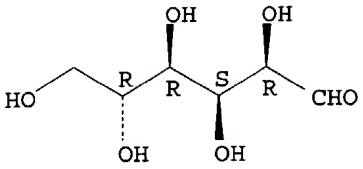
Absolute stereochemistry. Rotation (+).




IT **50-99-7**, D-**Glucose**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(blood; **1,5-anhydroglucitol** of human serum as marker of blood **glucose** control in diabetics)

RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L54 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1996:737006** HCAPLUS
DN **126:116486**
ED Entered STN: 14 Dec 1996
TI Predicting long-term **glycemic** control of post-educational type II **diabetic** patients by evaluating serum **1,5-anhydroglucitol** levels
AU Sone, Hirohito; Okuda, Yukichi; Yamaoka, Takashi; Kawakami, Yasushi; Odawara, Masato; Matsushima, Teruhiko; Kawai, Koichi; Yamashita, Kamejiro
CS Division of Endocrinology and Metabolism, Department of Internal Medicine, Institute of Clinical Medicine, University of Tsukuba, 2-1-1 Amakubo, Tsukuba, Ibaraki, 305, Japan
SO Diabetes Research and Clinical Practice (**1996**), 34(2), 83-88
CODEN: DRCPE9; ISSN: 0168-8227
PB Elsevier
DT Journal
LA English
CC 14-8 (Mammalian Pathological Biochemistry)
AB **1,5-Anhydroglucitol** (1,5-AG) is known to closely reflect diabetic control within several days. The possibility of predicting long-term glycemic control after an educational hospitalization of type II diabetic patients was investigated by examining the relationship between changes in serum 1,5-AG levels after a short-term trial home stay following an educational program and long-term changes in glycosylated Hb A1C (HbA1C) levels after discharge. After 22 patients with type II diabetes had successfully completed the educational hospitalization program, they returned as outpatients for 5 nights in a row. Changes in serum 1,5-AG levels were determined during this period. The HbA1C levels were then determined over a period of 3 mo after discharge, and the relationship between changes in 1,5-AG and HbA1C levels was examined Changes in serum 1,5-AG levels during the 5-day trial home stay and the changes in HbA1C levels during the 3 mo after discharge from the hospital were found to be significantly correlated ($r = 0.70$, $P<0.01$). A comparison of the decreased group, which exhibited a decrease in 1,5-AG levels of 5.0 μmol/l or more during the trial home stay, and the unchanged group, revealed that increases in body mass index 3 mo after discharge were significantly higher in the decreased group (1.2±0.4%) than in the unchanged group (0.2±0.5%) ($P<0.05$). Determination of serum 1,5-AG levels of patients with type II diabetes before and after a trial home stay following educational hospitalization was found to be useful in identifying patients at high risk of recurrence of poor glycemic control in the future.
ST **anhydroglucitol** serum glycemia control marker diabetes
IT Diabetes mellitus
(non-insulin-dependent; predicting long-term glycemic control of post-educational type II diabetic human by evaluating serum **1,5-anhydroglucitol**)
IT Blood serum
Prognosis
(predicting long-term glycemic control of post-educational type II diabetic human by evaluating serum **1,5-anhydroglucitol**)
IT **50-99-7**, D-**Glucose**, biological studies 62572-11-6,

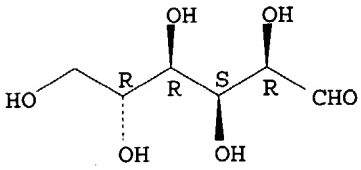
Hemoglobin A1c
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(predicting long-term glycemic control of post-educational type II diabetic human by evaluating serum **1,5-anhydroglucitol**)

IT **154-58-5**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(predicting long-term glycemic control of post-educational type II diabetic human by evaluating serum **1,5-anhydroglucitol**)

IT **50-99-7**, D-**Glucose**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(predicting long-term glycemic control of post-educational type II diabetic human by evaluating serum **1,5-anhydroglucitol**)

RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

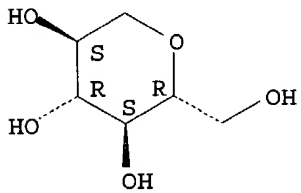
Absolute stereochemistry.




IT **154-58-5**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(predicting long-term glycemic control of post-educational type II diabetic human by evaluating serum **1,5-anhydroglucitol**)

RN 154-58-5 HCAPLUS
CN D-Glucitol, 1,5-anhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).




L54 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1995:269126** HCAPLUS
DN **122:130106**
ED Entered STN: 01 Jan 1995
TI Significance of **1,5-anhydro-D-glucitol** in **diabetes** mellitus management
AU Shimada, Naoki; Miyakawa, Michiko; Kondo, Takefumi; Sakurai, Yutaka; Teruya, Koji; Nakamura, Kou
CS Sch. Med., Keio Univ., Tokyo, 160, Japan

SO Sangyo Igaku (**1994**), 36(6), 448-9
CODEN: SAIGBL; ISSN: 0047-1879
DT Journal
LA Japanese
CC 14-8 (Mammalian Pathological Biochemistry)
Section cross-reference(s): 2

AB Oral **glucose** tolerance test significantly decreased **1**, **5-anhydro-D-glucitol** (I) level in blood after 30 min in patients with diabetes mellitus and significantly increased I after 120 min in patients with borderline diabetes mellitus. I level showed pos. correlation with insulinogenic index and no correlation with HbAlc or fructosamine in blood. Thus, I reflects the status of sugar metabolism at the test time and is considered to be a useful marker in controlling diabetic patients.

ST blood **anhydroglucitol** marker diabetes insulin secretion; **glucose** loading test **anhydroglucitol** diabetes

IT Blood
Diabetes mellitus
(correlation of blood level of **anhydroglucitol** with insulin secretion and use of the blood level for management of diabetes)

IT 9004-10-8, Insulin, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(correlation of blood level of **anhydroglucitol** with insulin secretion and use of the blood level for management of diabetes)

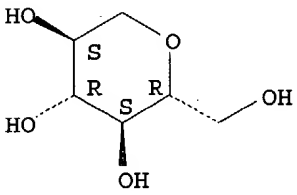
IT **154-58-5**, **1,5-Anhydro-D-glucitol**
RL: BPR (Biological process); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); PROC (Process); USES (Uses)
(correlation of blood level of **anhydroglucitol** with insulin secretion and use of the blood level for management of diabetes)

IT **50-99-7**, **Glucose**, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effect of **glucose** loading test on blood level of **anhydroglucitol** in relation to management of diabetes)

IT **154-58-5**, **1,5-Anhydro-D-glucitol**
RL: BPR (Biological process); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); PROC (Process); USES (Uses)
(correlation of blood level of **anhydroglucitol** with insulin secretion and use of the blood level for management of diabetes)

RN 154-58-5 HCAPLUS
CN D-Glucitol, 1,5-anhydro- (9CI) (CA INDEX NAME)

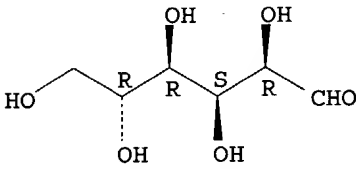
Absolute stereochemistry. Rotation (+).




IT **50-99-7**, **Glucose**, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(effect of **glucose** loading test on blood level of **anhydroglucitol** in relation to management of diabetes)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

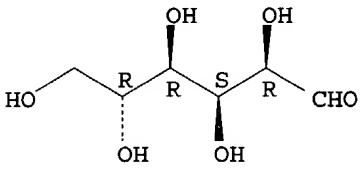
Absolute stereochemistry.




L54 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1994:433967** HCAPLUS
DN **121:33967**
ED Entered STN: 23 Jul 1994
TI Adaptation of muscle **glucose** transport with **caloric** restriction in adult, middle-aged, and old rats
AU Cartee, G. D.; Kietzke, E. W.; Briggs-Tung, C.
CS Biodyn. Lab., Univ. Wisconsin, Madison, WI, 53706, USA
SO American Journal of Physiology (**1994**), 266, R1443-R1447
CODEN: AJPHAP; ISSN: 0002-9513
DT Journal
LA English
CC 18-4 (Animal **Nutrition**)
Section cross-reference(s): 2, 13
AB The effects of prolonged caloric restriction (60% of ad libitum intake initiated at 14 wk of age) on **glucose** transport activity in isolated epitrochlearis muscles were studied in female Fischer 344 rats aged 8, 18, and 23 mo. Basal **3-O-methylglucose** transport (3-MG) rate (without insulin) was not significantly altered by caloric restriction. With a submaximally effective insulin concentration (75 μU/mL), 3-MG transport was enhanced in the caloric-restricted groups by 59, 59 and 105% at 8, 18, 23 mo of age, resp. With a maximally effective insulin concentration (20,000 μU/mL), 3-MG transport was increased after caloric restriction, despite no change in muscle GLUT4 **glucose** transporter protein content. These results indicate that chronic caloric restriction enhances insulin stimulation of the **glucose** transport system independent of changes in basal **glucose** transport or muscle GLUT4 levels, and insulin-stimulated **glucose** transport is enhanced in rats with chronic caloric restriction at least until 23 mo of age.
ST muscle **glucose** transport caloric restriction age; insulin muscle **glucose** transport caloric restriction
IT Senescence
(**glucose** transport by muscle in caloric restriction in)
IT Biological transport
(of **glucose**, by muscle in caloric restriction in senescence)
IT Dietary energy
(restriction of, **glucose** transport by muscle in, in senescence)
IT Muscle, metabolism
(epitrochlearis, **glucose** transport by, in caloric restriction in senescence)
IT Animal nutrition
(under-, **glucose** transport by muscle in, in senescence)
IT 9004-10-8, Insulin, biological studies
RL: BIOL (Biological study)
(**glucose** transport by muscle response to, in caloric

restriction in senescence)
IT **50-99-7**, D-**Glucose**, biological studies
RL: BIOL (Biological study)
(transport of, by muscle in caloric restriction in senescence)
IT **50-99-7**, D-**Glucose**, biological studies
RL: BIOL (Biological study)
(transport of, by muscle in caloric restriction in senescence)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

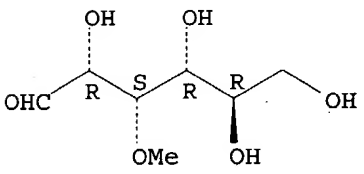
Absolute stereochemistry.




L54 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1993:602410** HCAPLUS
DN **119:202410**
ED Entered STN: 13 Nov 1993
TI Differential responses of intestinal **glucose** transporter mRNA transcripts to levels of **dietary sugars**
AU Miyamoto, Kenichi; Hase, Kyoko; Takagi, Toshimitsu; Fujii, Takeru; Taketani, Yutaka; Minami, Hisanori; Oka, Tatsuzo; Nakabou, Yukihiro
CS Sch. Med., Univ. Tokushima, Tokushima, 770, Japan
SO Biochemical Journal (**1993**), 295(1), 211-15
CODEN: BIJOAK; ISSN: 0306-3275
DT Journal
LA English
CC 18-4 (Animal **Nutrition**)
Section cross-reference(s): 13
AB Dietary sugars are known to stimulate intestinal **glucose** transport activity, but the specific signals involved are unknown. The Na+-dependent **glucose** co-transporter (SGLT1), the liver-type facilitative **glucose** transporter (GLUT2), and the intestinal-type facilitative **glucose** transporter (GLUT5) are all expressed in rat jejunum. In the present study, the effects of dietary sugars on these **glucose** transporter genes were studied. A high-**glucose** diet stimulated **glucose** transport activity and increased the levels of SGLT1 and GLUT2 mRNAs in rat jejunum. **3-O-Methylglucose**, D-galactose, D-fructose, D-**mannose**, and D-xylose can mimic the regulatory effect of **glucose** on the SGLT1 mRNA level in rat jejunum. However, only D-galactose and D-fructose increased the levels of GLUT2 mRNA. The GLUT5 mRNA level was increased significantly only by D-fructose. These results suggest that the increase in intestinal transport activity in rats caused by dietary **glucose** is due to an increase in the levels of SGLT1 and GLUT2 mRNAs and that these increases in mRNA may be caused by enhancement of the transcriptional rate. For expression of the SGLT1 gene, the signal need not be a metabolizable or transportable substrate whereas, for expression of the GLUT2 gene, metabolism of the substrate in the liver may be necessary for signaling. Only D-fructose is an effective signal for expression of the GLUT5 gene.
ST intestine **glucose** transporter transcription sugar diet
IT Carbohydrates and Sugars, biological studies
RL: BIOL (Biological study)
(**glucose** transporter proteins of intestine response to dietary)

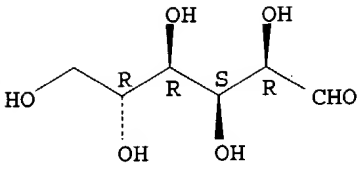
IT Glycoproteins, specific or class
RL: FORM (Formation, nonpreparative)
(GLUT-2 (**glucose**-transporting, 2), formation of, in intestine, dietary sugars effect on)
IT Glycoproteins, specific or class
RL: FORM (Formation, nonpreparative)
(GLUT-5 (**glucose**-transporting, 5), formation of, in intestine, dietary sugars effect on)
IT Proteins, specific or class
RL: FORM (Formation, nonpreparative)
(**glucose**-sodium-cotransporting, gene SGLT1, formation of, in intestine, dietary sugars effect on)
IT Intestine, composition
(small, **glucose** transporter proteins of, dietary sugars effect on)
IT Gene, animal
RL: BIOL (Biological study)
(GLUT2, of intestine, dietary sugars effect on expression of)
IT Gene, animal
RL: BIOL (Biological study)
(GLUT5, of intestine, dietary sugars effect on expression of)
IT Gene, animal
RL: BIOL (Biological study)
(SGLT1, of intestine, dietary sugars effect on expression of)
IT 57-48-7, D-Fructose, biological studies 58-86-6, D-Xylose, biological studies 59-23-4, D-Galactose, biological studies **146-72-5**, **3-O-Methylglucose** 3458-28-4, D-**Mannose**
RL: BIOL (Biological study)
(**glucose** transporter proteins of intestine response to dietary)
IT **50-99-7**, D-**Glucose**, biological studies
RL: BIOL (Biological study)
(transporter proteins for, of intestine, dietary sugars effect on)
IT **146-72-5**, **3-O-Methylglucose**
RL: BIOL (Biological study)
(**glucose** transporter proteins of intestine response to dietary)
RN 146-72-5 HCAPLUS
CN D-Glucose, 3-O-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT **50-99-7**, D-**Glucose**, biological studies
RL: BIOL (Biological study)
(transporter proteins for, of intestine, dietary sugars effect on)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

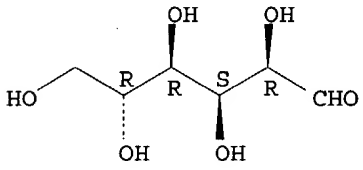
Absolute stereochemistry.




L54 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1992:148997** HCAPLUS
DN **116:148997**
ED Entered STN: 17 Apr 1992
TI **Feeding** modulation by pentose and hexose analogs
AU Sakata, Toshiie; Kurokawa, Mamoru
CS Dep. Intern. Med. I, Med. Coll. Oita, Hazama, 879-55, Switz.
SO American Journal of Clinical Nutrition (**1992**), 55(1, Suppl.), 272S-277S
CODEN: AJCNAC; ISSN: 0002-9165
DT Journal
LA English
CC 13-6 (Mammalian Biochemistry)
Section cross-reference(s): **18**
AB D-Glucosamine (GlcN), N-acetyl-D-glucosamine (GlcNAc) and **2**, **5-anhydro-D-mannitol** (2,5-AM) were infused into the rat third cerebroventricle (icv) to compare their effects on food intake. GlcN (24 μmol/L) accelerated eating, and concomitantly increased plasma **glucose**, free fatty acids, and glycerol without affecting plasma insulin. GlcN accelerated lateral hypothalamic (LHA), and reciprocally decreased ventromedial hypothalamic (VMH) neuronal activity. Infusion of 12 μmol GlcNAc icv did not affect feeding, but oral administration (1200 μmol/L) induced feeding. The GlcNAc-induced feeding was completely abolished by bilateral truncal vagotomy. Infusion of 2,5-AM dose-dependently induced feeding. A maximal dose (24 μmol/L) did not substantially change plasma **glucose** or insulin. Unilateral 2,5-AM microinfusion (1.2 μmol/L) into the VMH, but not into the LHA, elicited feeding. The characteristic actions of these analogs are useful to clarify central control of food intake and also as probes to examine relations between feeding modulation and energy metabolism in the central nervous system.
ST appetite regulation hypothalamus glucosamine; acetylglucosamine hypothalamus appetite regulation; **anhydromannitol** hypothalamus appetite regulation
IT Blood plasma
(insulin of, ventromedial and lateral hypothalamus response to glucosamine and acetylglucosamine and **anhydromannitol** in relation to appetite and)
IT Fatty acids, biological studies
RL: BIOL (Biological study)
(of blood plasma, ventromedial and lateral hypothalamus response to glucosamine and acetylglucosamine and **anhydromannitol** effect on, appetite in relation to)
IT Appetite
(regulation of, glucosamine and acetylglucosamine and **anhydromannitol** effect on ventromedial and lateral hypothalamus in relation to)
IT Blood sugar
(ventromedial and lateral hypothalamus response to glucosamine and acetylglucosamine and **anhydromannitol** effect on, appetite in relation to)
IT Hypothalamus
(lateral, appetite regulation by, glucosamine and acetylglucosamine and

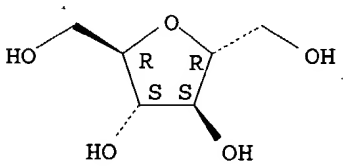
**anhydromannitol** effect on)
IT Hypothalamus
(ventromedial, appetite regulation by, glucosamine and acetylglucosamine and **anhydromannitol** effect on)
IT **50-99-7**, **Glucose**, biological studies 56-81-5, Glycerol, biological studies 9004-10-8, Insulin, biological studies
RL: BIOL (Biological study)
(of blood plasma, ventromedial and lateral hypothalamus response to glucosamine and acetylglucosamine and **anhydromannitol** effect on, appetite in relation to)
IT 3416-24-8, D-Glucosamine 7512-17-6, N-Acetyl-D-glucosamine **41107-82-8**, **2,5-Anhydro-D-mannitol**
RL: BIOL (Biological study)
(ventromedial and lateral hypothalamus regulation of appetite response to)
IT **50-99-7**, **Glucose**, biological studies
RL: BIOL (Biological study)
(of blood plasma, ventromedial and lateral hypothalamus response to glucosamine and acetylglucosamine and **anhydromannitol** effect on, appetite in relation to)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT **41107-82-8**, **2,5-Anhydro-D-mannitol**
RL: BIOL (Biological study)
(ventromedial and lateral hypothalamus regulation of appetite response to)
RN 41107-82-8 HCAPLUS
CN D-Mannitol, 2,5-anhydro- (9CI) (CA INDEX NAME)

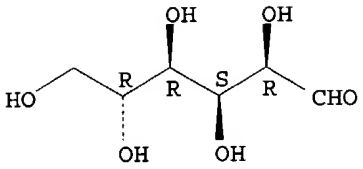
Absolute stereochemistry.




L54 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1991:678683** HCAPLUS
DN **115:278683**
ED Entered STN: 27 Dec 1991
TI Adaptation of **glucose** transport across rat enterocyte basolateral membrane in response to altered **dietary** carbohydrate intake
AU Cheeseman, C. I.; Harley, B.
CS Dep. Physiol., Univ. Alberta, Edmonton, AB, T6G 2H7, Can.
SO Journal of Physiology (Cambridge, United Kingdom) (**1991**), 437,

563-75
CODEN: JPHYA7; ISSN: 0022-3751
DT Journal
LA English
CC 18-4 (Animal **Nutrition**)
AB The effect of changes in the carbohydrate content of the diet on D-**glucose** transport across the basolateral membrane of rat enterocytes has been compared with alterations in transport across the brush-border membrane. Measurement of carrier-mediated D-**glucose** uptake across the jejunal brush border from animals fed a low- or high-carbohydrate diet showed a change in the maximal rate of transport by 7 days which was maintained for 14 days. The low-carbohydrate diet produced a progressive decline in uptake whereas the high-carbohydrate diet increased the transport. There was no alteration in the apparent affinity constant as a result of the dietary manipulations and no discernible trend for changes in the passive permeability to **glucose.** Transport of D-**glucose** across the basolateral membrane was also affected by the dietary composition After 7 days the maximal transport rate was greater in the animals fed the high-carbohydrate diet. However, while this increase was maintained for 14 days, uptake into vesicles prepared after 2 wks on the low-carbohydrate diet showed a return to control levels. A detailed anal. of the time course of these responses showed the effect on basolateral membrane transport to be inducible within 3 days of switching from the low- to the high-carbohydrate diet and could be reversed within a similar period. Kinetic studies using purified basolateral membrane vesicles confirmed that the change in transport was the result of an increase in the maximal transport rate. Anal. of cytochalasin B binding to these membranes showed a parallel change in the number of **glucose**-inhibitable binding sites. The component of the diet responsible for these changes was further investigated by replacing the **glucose** in the high-carbohydrate food with galactose, fructose, **mannose** or **3-O-methylglucose.** Only **glucose** and fructose produced any significant change in the transport across the basolateral membrane. It is concluded that in response to changes in the carbohydrate content of the diet there are alterations in the capacity for **glucose** transport across the basolateral membrane of the enterocyte as well as in the brush-border membrane. The change in transport across the basolateral membrane is best explained by an increase in the number of **glucose** carriers in this membrane.
ST carbohydrate diet enterocyte **glucose** transport adaptation
IT Carbohydrates and Sugars, biological studies
RL: BIOL (Biological study)
(adaptation of **glucose** transport across enterocyte membrane response to altered dietary intake of)
IT Biological transport
(of **glucose**, by enterocyte, dietary carbohydrate level in relation to)
IT Intestine, metabolism
(enterocyte, **glucose** transport across of membrane of, adaptation to altered dietary carbohydrate intake of)
IT **50-99-7, Glucose**, biological studies
RL: BIOL (Biological study)
(transport across enterocyte membrane of, adaptation to altered dietary carbohydrate intake of)
IT **50-99-7, Glucose**, biological studies
RL: BIOL (Biological study)
(transport across enterocyte membrane of, adaptation to altered dietary carbohydrate intake of)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

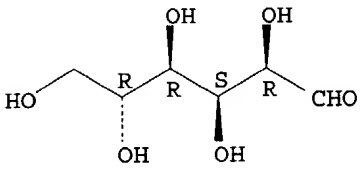
Absolute stereochemistry.




L54 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1989:631152** HCAPLUS
DN **111:231152**
ED Entered STN: 23 Dec 1989
TI Stimulation of **gastric** inhibitory polypeptide release in ob/ob mice by oral administration of sugars and their analogs
AU Flatt, Peter R.; Kwasowski, Piotr; Bailey, Clifford J.
CS Dep. Biochem., Univ. Surrey, Guildford/Surrey, GU2 5XH, UK
SO Journal of Nutrition (**1989**), 119(9), 1300-3
CODEN: JONUAI; ISSN: 0022-3166
DT Journal
LA English
CC 18-4 (Animal **Nutrition**)
Section cross-reference(s): 2
AB The effect of oral administration of sugars and their analogs ( **glucose**, galactose, fructose, **mannose**, sucrose, N-acetylglucosamine, 2-**deoxyglucose**, **3-O-methylglucose**, and α-methyl-glucoside) on plasma gastric inhibitory polypeptide (GIP) concentration was examined in 18-h fasted ob/ob mice.
Administration of sucrose (5.52 mol/kg body weight), or the monosaccharides (11.04 mol/kg body weight) **glucose**, galactose, or fructose, elicited prompt GIP responses that peaked at 30 min. Similar effects were induced by **3-O-methylglucose** or α-methyl-glucoside, but the stimulatory action of 2-**deoxyglucose** was delayed. In contrast to the other sugars, N-acetylglucosamine decreased plasma GIP concentration, while **mannose** exerted no effect. Evidently, sugars using the Na+-**glucose** cotransporter at the luminal brush border stimulate GIP release without the necessity of being metabolized or removed from the cell by the **glucose** transporter at the basolateral membrane. The ability of fructose to stimulate GIP release in ob/ob mice suggests that the Na+-**glucose** cotransporter does not represent an exclusive trigger for sugar-induced GIP secretion.
ST sugar diet gastric inhibitory polypeptide
IT Blood plasma
(GIP of, dietary sugars and their analogs effect on)
IT Carbohydrates and Sugars, biological studies
Monosaccharides
RL: BIOL (Biological study)
(gastric inhibitory polypeptide release stimulation by dietary)
IT **50-99-7**, **Glucose**, biological studies **50-99-7D**, **Glucose**, analogs 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 59-23-4, Galactose, biological studies 97-30-3, α-Methyl-glucoside **146-72-5**, **3-O-Methylglucose** 154-17-6, 2-**Deoxyglucose** 3458-28-4, **Mannose** 7512-17-6, N-Acetylglucosamine
RL: BIOL (Biological study)
(gastric inhibitory polypeptide release stimulation by dietary)
IT **50-99-7**, **Glucose**, biological studies **50-99-7D**, **Glucose**, analogs **146-72-5**, **3-O-Methylglucose**
RL: BIOL (Biological study)

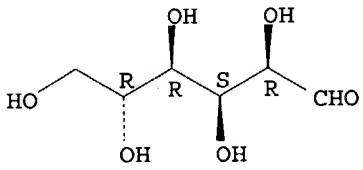
(gastric inhibitory polypeptide release stimulation by dietary)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



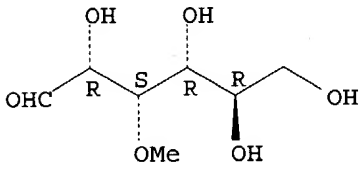

RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




RN 146-72-5 HCAPLUS
CN D-Glucose, 3-O-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




4/6

L54 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1989:22727** HCAPLUS
DN **110:22727**
ED Entered STN: 21 Jan 1989
TI Structural evaluation of **glucose** analogs on **feeding** elicitation in rat
AU Kurata, Kazuo; Fujimoto, Kazuma; Sakata, Toshiie
CS Fac. Med., Kyushu Univ., Fukuoka, 812, Japan
SO Metabolism, Clinical and Experimental (**1989**), 38(1), 46-51
CODEN: METAAJ; ISSN: 0026-0495
DT Journal
LA English
CC 18-4 (Animal **Nutrition**)
AB The effects of 12-μmol doses of the **glucose** analogs glucosamine, 2-**fluoroglucose**, 2-**chloroglucose**, and 2-**deoxyglucose** (which were modified at C 2 of the glucopyranose ring) and 1-**aminoglucose** and 1-**deoxyglucose** (modified at C 1) on feeding behavior and plasma **glucose**, insulin, and glycerol were examined after infusion into the rat brain 3rd ventricle. The plasma **glucose** and glycerol levels were elevated by glucosamine or 1-**aminoglucose**. Plasma insulin levels were unchanged by these analogs. Feeding was induced in 62-87% of the rats tested after

infusion of glucosamine, 2-**fluoroglucose**, 2-**chloroglucose**, 2-**deoxyglucose**, 1-**aminoglucose**, or 1-**deoxyglucose** (mean meal size in responding rats, 43.9, 25.8, 22.7, 16.0, 42.3, and 3.8 pellets, resp.). The order of potency to induce feeding was amino, halogen, and H groups. These data reinforced the concept that the potency of **glucose** analogs to induce feeding depends on substituents at C 1 and C 2 of the glucopyranose ring.

ST **glucose** analog diet feeding behavior; appetite **glucose** analog brain

IT Appetite
Blood sugar
(**glucose** analogs effect on)

IT Blood plasma
(glycerol of, **glucose** analogs effect on)

IT Behavior
(feeding, **glucose** analogs effect on)

IT Molecular structure-biological activity relationship
(feeding behavior-affecting, of **glucose** analogs)

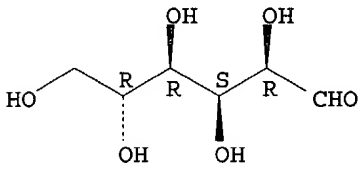
IT **50-99-7D**, **Glucose**, analogs 154-17-6, 2-**Deoxyglucose 154-58-5** 3416-24-8, Glucosamine 7284-37-9 14685-79-1 29702-43-0
RL: BIOL (Biological study)
(feeding elicitation response to intracerebral)

IT 56-81-5, Glycerol, biological studies
RL: BIOL (Biological study)
(of blood plasma, **glucose** analogs effect on)

IT **50-99-7D**, **Glucose**, analogs **154-58-5**
RL: BIOL (Biological study)
(feeding elicitation response to intracerebral)

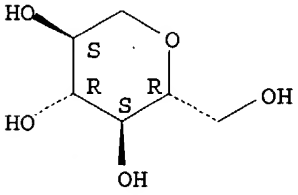
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




RN 154-58-5 HCAPLUS
CN D-Glucitol, 1,5-anhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).




L54 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1986:423460** HCAPLUS
DN **105:23460**
ED Entered STN: 26 Jul 1986
TI **Dietary** potentiation of the antifertility effects of **5-thio-D-glucose** in male rats

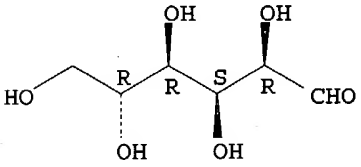
AU Dills, William L.; Berndtson, William E.; Covey, Thomas R.; Kingsley-Hickman, Peter B.
CS Dep. Chem., Southeast. Massachusetts Univ., North Dartmouth, MA, 02747, USA
SO Journal of Nutrition (**1986**), 116(5), 900-15
CODEN: JONUAI; ISSN: 0022-3166
DT Journal
LA English
CC 18-4 (Animal **Nutrition**)
Section cross-reference(s): 2
AB Male rats of proven fertility were fed the following diets for 28 days either with or without 0.075% **5-thioglucose** (5-THG) [**20408-97-3**]: AIN-76 diet (A76): a diet with 13% casein, 2% **glucose** and the balance of the calories as free corn-oil fatty acids (2G); and a similar diet, isocaloric with 2G, with the **glucose** level increased to 20% (20G). The diets alone without 5-THG had no effect on any of the parameters measured. Body weight gain was lower in rats fed diets containing 5-THG than in those fed diets without 5-THG. In rats fed A76, the only 5-THG effects on male reproductive tract (MRT) tissues was the appearance of testicular multinucleate giant cells (MGC). In rats fed either 2G or 20G, the MRT effects of 5-THG included the appearance of MGC, a lower number of germ cells at most stages of maturation, lower sperm counts, and biochem. changes in testis slices and in germ cell preparation compared to rats not fed 5-THG. There were fewer Step 7 spermatids in rats fed 5-THG in 2G than in those fed 5THG in 20G. The MRT toxicity of 5-THG is influenced by diet, being potentiated by the low-protein diet high in free fatty acids and, to a lesser extent, by low **glucose** [**50-99-7**] levels within these diets.
ST **thioglucose** contraceptive diet; protein diet **thioglucose** contraception; fatty acid diet **thioglucose** contraception; **glucose** diet **thioglucose** contraception
IT Protein formation
(by testis, dietary acetoacetate and **glucose** and **thioglucose** effect on)
IT Sperm
(formation of, **thioglucose** and other **glucose** analogs effect on, diet in relation to)
IT Body weight
(**thioglucose** of diet decrease of)
IT Seminal vesicle
(weight of, ketofructose increase of)
IT Fatty acids, biological studies
RL: BIOL (Biological study)
(corn-oil, thioglycose effect on male reproductive tract response to dietary)
IT Contraceptives
(male, **thioglucose** and other **glucose** analogs, diet effect on)
IT Reproductive tract
(male, thiogluocose and other **glucose** analogs effect on, diet in relation to)
IT **50-99-7D**, analogs **146-72-5** 154-17-6 1684-29-3 1949-89-9 13224-99-2 **20408-97-3** **41107-82-8**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(male reproductive tract response to, diet in relation to)
IT 541-50-4, biological studies
RL: BIOL (Biological study)
(protein formation by testis response to dietary **thioglucose** and)
IT **50-99-7**, biological studies
RL: BIOL (Biological study)
(**thioglucose** effects on male reproductive tract response to

dietary)

IT **50-99-7D**, analogs **146-72-5 20408-97-3 41107-82-8**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(male reproductive tract response to, diet in relation to)

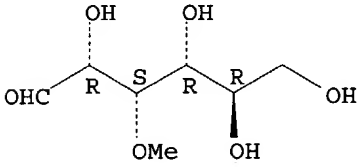
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



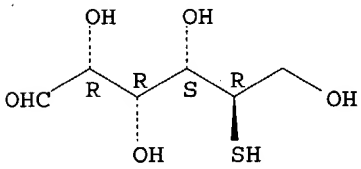

RN 146-72-5 HCAPLUS
CN D-Glucose, 3-O-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



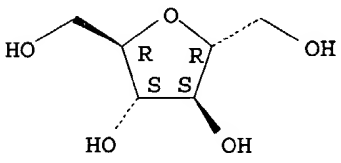

RN 20408-97-3 HCAPLUS
CN D-Glucose, 5-thio- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).




RN 41107-82-8 HCAPLUS
CN D-Mannitol, 2,5-anhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

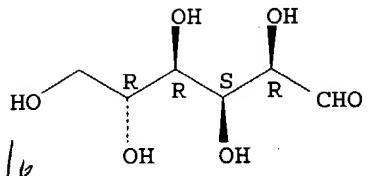



IT **50-99-7**, biological studies
RL: BIOL (Biological study)
(**thioglucose** effects on male reproductive tract response to dietary)

RN 50-99-7 HCAPLUS

CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

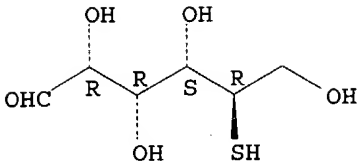
Absolute stereochemistry.




4/6

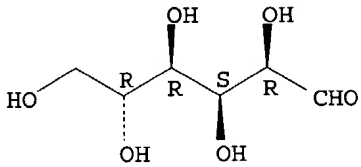
L54 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1980:561259** HCAPLUS
DN **93:161259**
ED Entered STN: 12 May 1984
TI **5-Thio-D-glucose**: hypothermic responses in mice
AU Francesconi, Ralph; Mager, Milton
CS US Army Res. Inst. Environ. Med., Natick, MA, 01760, USA
SO American Journal of Physiology (1980), 239(3), R214-R218
CODEN: AJPHAP; ISSN: 0002-9513
DT Journal
LA English
CC 1-5 (Pharmacodynamics)
AB Adult male mice were administered several doses of **5-thio-D-glucose** (5-TG) [**20408-97-3**] at 2 environmental temps., 4 and 22°. Both intracerebroventricular (icv) and i.p. administration of 5-TG resulted in significant decrements in rectal temperature (Tre) that were dose dependent. After 30 min, the hypothermic effects were significantly exacerbated by cold exposure (4 vs. 22°) and were likewise intensified significantly by food deprivation. These redns. in Tre were accompanied by significant increases in circulating levels of **glucose** [**50-99-7**]. 5-TG may elicit both central and peripheral cellular glucopenia concomitant with circulatory hyperglycemia. Thus, the resultant hypothermia may be arising from competitive inhibition of glycolysis by 5-TG intermediates as well as reduced availability of tissue **glucose.**
ST **thioglucose** hypothermia **glucose** metab
IT **Hypothermia**
(from **thioglucose**, **glucose** metabolism in relation to)
IT **20408-97-3**
RL: BIOL (Biological study)
(hypothermia from, **glucose** metabolism in relation to)
IT **50-99-7**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, hypothermia from **thioglucose** in relation to)
IT **20408-97-3**
RL: BIOL (Biological study)
(hypothermia from, **glucose** metabolism in relation to)
RN 20408-97-3 HCAPLUS
CN D-Glucose, 5-thio- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



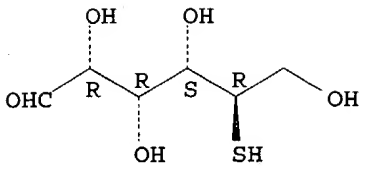
IT **50-99-7**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, hypothermia from **thioglucose** in relation to)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



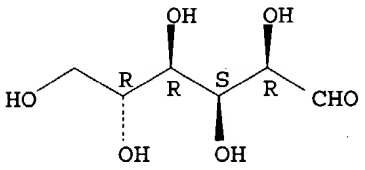
L54 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1979:539434** HCAPLUS
DN **91:139434**
ED Entered STN: 12 May 1984
TI In vivo and in **vitro** effects of **5-thio-D-glucose** in D-**glucose** dependent systems
AU Zysk, John Ronald
CS Purdue Univ., Lafayette, IN, USA
SO (**1978**) 106 pp. Avail.: Univ. Microfilms Int., Order No. 7914991
From: Diss. Abstr. Int. B 1979, 40(1), 230
DT Dissertation
LA English
CC 18-4 (Animal **Nutrition**)
AB Unavailable
ST **thioglucose** diet **glucose** metab; spermatogenesis diet **glucose**
IT Sperm
(formation. of, **5-thio-D-glucose** of diet effect on)
IT **20408-97-3**
RL: BIOL (Biological study)
(**glucose** metabolism and spermatogenesis in response to dietary)
IT **50-99-7**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, **5-thio-D-glucose** diet effect on)
IT **20408-97-3**
RL: BIOL (Biological study)
(**glucose** metabolism and spermatogenesis in response to dietary)
RN 20408-97-3 HCAPLUS
CN D-Glucose, 5-thio- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT **50-99-7**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, **5-thio-D-glucose**
diet effect on)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

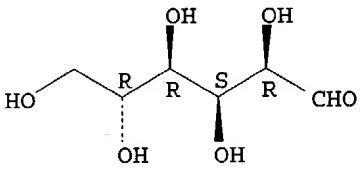
Absolute stereochemistry.



L54 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1977:3146** HCAPLUS
DN **86:3146**
ED Entered STN: 12 May 1984
TI A role for **glucose** in hypothermic hamsters
AU Resch, G. E.; Musacchia, X. J.
CS Sch. Med., Univ. Missouri, Columbia, MO, USA
SO American Journal of Physiology (1976), 231(6), 1729-34
CODEN: AJPHAP; ISSN: 0002-9513
DT Journal
LA English
CC 14-2 (Mammalian Pathological Biochemistry)
Section cross-reference(s): 13
AB Hamsters underwent hypothermia when exposed to a mixture of 80% He and 20% O at low ambient temps. The hypothermic hamster became hypoglycemic, and reversal of hypoglycemia was effected with **glucose** infusion. Hypothermic hamsters showed a fivefold increase in survival times from 20 to 100.5 hr when infused with **glucose** which maintained a blood level at about 45 mg/100 ml. A potential role for osmotic effects of the infusion was tested and eliminated. There was no improvement in survival of **3-O-methylglucose** or dextran 40-infused animals. The fact that death eventually occurred even in the **glucose**-infused animal after about 4 days and that O consumption underwent a slow decrement in that period suggested that hypothermic survival is not wholly substrate limited. **Glucose**-14U use showed that localization of the 14C was greatest in brain tissue and diaphragm, intermediate in heart and kidney, and lowest in skeletal muscle and liver.
ST **glucose** hypothermia death hamster
IT Death
(from hypothermia, in hamster, **glucose** in)
IT **Hypothermia**
(hamster death from, **glucose** in)
IT Hypoglycemia
(in hypothermia)

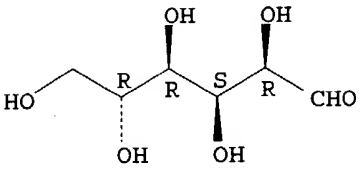
IT **50-99-7**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, in hypothermic hamster)
IT **50-99-7**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, in hypothermic hamster)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



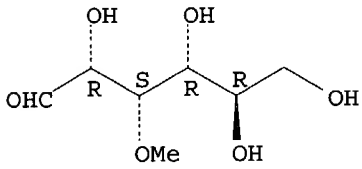

L54 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1972:124603** HCAPLUS
DN **76:124603**
ED Entered STN: 12 May 1984
TI Monosaccharide **induction** of 3-O-**methyl glucose** transport through the rat jejunum
AU Roy, Claude C.; Dubois, Reuben S.
CS Med. Cent., Univ. Colorado, Denver, CO, USA
SO Proceedings of the Society for Experimental Biology and Medicine (**1972**), 139(3), 883-6
CODEN: PSEBAA; ISSN: 0037-9727
DT Journal
LA English
CC 13 (Mammalian Biochemistry)
Section cross-reference(s): **18**
AB The effects of a 48-hr intraduodenal perfusion of electrolyte solution, 50mM **3-O-methylglucose** (3-O-MG), **glucose**, or fructose, or 1.39M **glucose** or fructose on the subsequent absorption of 3-O-MG were studied in 20-cm segments of rat jejenum perfused extracorporeally through the superior mesenteric artery. The feeding of **glucose** or fructose enhanced the transport of 3-O-MG while 3-O-MG itself had no effect. This adaptive change was independent of substrate concentration, number of cal. fed, weight loss, bowel wall **glucose** content, and hexokinase activity of mucosal scrapings.
ST intestine **methylglucose** absorption; sugars **methylglucose** absorption intestine
IT Intestine, metabolism
(**methylglucose** transport by, fructose and **glucose** effect on)
IT **50-99-7**, biological studies 57-48-7, biological studies
RL: BIOL (Biological study)
(**methylglucose** transport by intestines in response to)
IT **146-72-5**
RL: BIOL (Biological study)
(transport of, by intestines, fructose and **glucose** effect on)
IT **50-99-7**, biological studies
RL: BIOL (Biological study)
(**methylglucose** transport by intestines in response to)
RN 50-99-7 HCAPLUS
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT **146-72-5**
RL: BIOL (Biological study)
(transport of, by intestines, fructose and **glucose** effect on)
RN 146-72-5 HCAPLUS
CN D-Glucose, 3-O-methyl- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.




=> => fil medline
FILE 'MEDLINE' ENTERED AT 15:04:38 ON 27 MAR 2004

FILE LAST UPDATED: 26 MAR 2004 (20040326/UP). FILE COVERS 1951 TO DATE.

On February 29, 2004, the 2004 MeSH terms were loaded. See HELP RLOAD for details. OLDMEDLINE now back to 1951.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2004 vocabulary. See http://www.nlm.nih.gov/mesh/ and http://www.nlm.nih.gov/pubs/techbull/nd03/nd03_mesh.html for a description of changes.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all tot

L86 ANSWER 1 OF 16 MEDLINE on STN
AN **97073475** MEDLINE
DN PubMed ID: **8916199**
TI Glucoprivation attenuates the hypophagia induced by epinephrine in mice.
AU Villanueva I; Racotta I S; Racotta R
CS Departamento de Fisiologia, Escuela Nacional de Ciencias Biologicas, IPN, Carpio y Plan de Ayala, Mexico D.F., Mexico.
SO Physiology & behavior, **(1996 Nov)** 60 (5) 1383-6.
Journal code: 0151504. ISSN: 0031-9384.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199703
ED Entered STN: 19970321
Last Updated on STN: 19970321
Entered Medline: 19970311

AB It is well known that relatively high doses of epinephrine (E) injected intraperitoneally (IP) produce hypophagia, possibly by an action on liver metabolism. The purpose of the present experiment was to find out if lipoprivation with 2-mercaptoacetate (MA, 800 mumol/kg, IP) or glucoprivation with either 2-deoxy-D-glucose (2DG, 500 mg/kg, IP) or **2,5-anhydro-D-mannitol** (2,5-AM, 400 mg/kg, IP) were able to modify the anorectic effect of E (300 micrograms/kg). At the onset of the dark period, mice received a first injection of saline (S) or one of the metabolic blockers mentioned above and, 30 min later, a second injection of S or E; then 30-min food intake was measured. E alone decreased feeding by 80% ($p < 0.05$); this effect was nearly the same when MA was previously injected. In contrast, in the presence of 2DG or 2,5-AM, E reduced food intake only by 22% and 24%, respectively (not significant). Attenuation of E-induced hypophagia by these blockers suggests the participation of glucose utilization pathways. Because it has been shown that 2,5-AM acts specifically on the liver, we could additionally suggest that E reduces feeding by an action on glucose hepatic metabolism.

CT Check Tags: Male; Support, Non-U.S. Gov't
Animals
**Antimetabolites: PD, pharmacology**
Appetite Depressants: AD, administration & dosage
*Appetite Depressants: PD, pharmacology
**Deoxyglucose: PD, pharmacology**
**Diet**
Dietary Carbohydrates: ME, metabolism
Eating: DE, drug effects
Epinephrine: AD, administration & dosage
*Epinephrine: PD, pharmacology
Feeding Behavior: DE, drug effects
*Feeding Behavior: PH, physiology
**Glucose: ME, metabolism**
***Glucose: PH, physiology**
Lipids: ME, metabolism
Liver: ME, metabolism
Mannitol: AA, analogs & derivatives
Mannitol: PD, pharmacology
Mice
Oxidation-Reduction
Thioglycolates: PD, pharmacology

RN 154-17-6 (Deoxyglucose); **41107-82-8 (2,5-anhydromannitol)**; **50-99-7 (Glucose)**; 51-43-4 (Epinephrine); 68-11-1 (2-mercaptoacetate); 69-65-8 (Mannitol)

CN 0 (Antimetabolites); 0 (Appetite Depressants); 0 (Dietary Carbohydrates); 0 (Lipids); 0 (Thioglycolates)

L86 ANSWER 2 OF 16 MEDLINE on STN
AN **96218883** MEDLINE
DN PubMed ID: **8630697**
TI Brief dietary **restriction** increases skeletal muscle glucose transport in old Fischer 344 rats.
AU Dean D J; Cartee G D
CS Biodynamics Laboratory, University of Wisconsin, Madison, USA.
NC AG-10026 (NIA)
SO journals of gerontology. Series A, Biological sciences and medical sciences, **(1996 May)** 51 (3) B208-13.
Journal code: 9502837. ISSN: 1079-5006.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199607
ED Entered STN: 19960715

Last Updated on STN: 19990129
Entered Medline: 19960701

AB The primary purpose of this study was to determine the impact of brief dietary **restriction** (DR; 5 or 20 days) on skeletal muscle glucose transport activity (GTA) of 24-month-old female Fischer 344 rats. Basal GTA of isolated epitrochlearis muscles was unaffected by DR. Insulin-stimulated GTA was significantly increased by DR only at 20 days (51%). We also assessed the influence of DR on energy sources (blood-borne and stored). An approximately 20% decline in glycemia occurred in each DR group, but plasma-free fatty acid and beta-hydroxybutyrate concentrations were unaffected. Plasma insulin was reduced by 50% after 20 days. Hepatic glycogen was rapidly mobilized (-69% at 5 days; -83% at 20 days). The depletions of visceral adipose stores was slower (no significant decline at 5 days; -30% at 20 days), but the eventual reduction accounts for a significant amount of energy. The results demonstrate that muscle from old rats can rapidly upregulate GTA in response to brief DR. The relative magnitude of this increase represents a substantial portion of the increases previously observed after prolonged DR.

CT Check Tags: Female; Support, U.S. Gov't, P.H.S.
3-Hydroxybutyric Acid
**3-O-Methylglucose**
*Aging: ME, metabolism
Animals
Biological Transport
Body Weight
***Diet**
Fatty Acids, Nonesterified: BL, blood
***Glucose: ME, metabolism**
Glycogen: ME, metabolism
Hydroxybutyrates: BL, blood
Insulin: BL, blood
Liver Glycogen: ME, metabolism
Methylglucosides: ME, metabolism
Muscle Proteins: ME, metabolism
Muscle, Skeletal: AH, anatomy & histology
*Muscle, Skeletal: ME, metabolism
Organ Weight
Rats
Rats, Inbred F344

RN 11061-68-0 (Insulin); **146-72-5 (3-O-Methylglucose)**; 300-85-6 (3-Hydroxybutyric Acid); **50-99-7 (Glucose)**; 9005-79-2 (Glycogen)

CN 0 (Fatty Acids, Nonesterified); 0 (Hydroxybutyrates); 0 (Liver Glycogen); 0 (Methylglucosides); 0 (Muscle Proteins)

L86 ANSWER 3 OF 16 MEDLINE on STN
AN **96002756** MEDLINE
DN PubMed ID: **7587851**
TI **1,5-Anhydro-D-glucitol**
evaluates daily glycemic excursions in well-controlled NIDDM.
AU Kishimoto M; Yamasaki Y; Kubota M; Arai K; Morishima T; Kawamori R; Kamada T
CS First Department of Medicine, Osaka University School of Medicine, Japan.
SO Diabetes care, **(1995 Aug)** 18 (8) 1156-9.
Journal code: 7805975. ISSN: 0149-5992.
CY United States
DT (CLINICAL TRIAL)
(CONTROLLED CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199511
ED Entered STN: 19960124

Last Updated on STN: 19960124
Entered Medline: 19951130

AB OBJECTIVE--To evaluate the usefulness of plasma **1,5-anhydro-D-glucitol** (1,5-AG) as a possible marker for daily glycemic excursion, we measured plasma 1,5-AG, HbA1c, fasting plasma glucose (FPG) level, and daily excursion of glycemia, from which the M-value (after Schlichtkrull) was calculated as an index of daily glycemic excursion. RESEARCH DESIGN AND METHODS--The subjects were 76 patients with well-controlled non-insulin-dependent diabetes mellitus (NIDDM) treated with diet therapy only (diet, n = 17), oral hypoglycemic agents (OHA, n = 28), conventional insulin therapy (CIT, n = 16), or multiple insulin injection therapy (MIT, n = 15). RESULTS--HbA1c values were similar among all the groups (diet, 6.9 +/- 0.6; OHA, 7.2 +/- 0.5; CIT, 7.1 +/- 0.6; MIT, 7.2 +/- 0.5%). The MIT group showed a significantly higher 1,5-AG concentration (11.5 +/- 5.3 micrograms/ml), a significantly lower M-value (9.2 +/- 5.2), and little risk of hypoglycemia ( < 4 mmol/l) and hyperglycemia ( > 10 mmol/l) (1.3 +/- 1.1 times/24 h) compared with the CIT group (6.9 +/- 3.3 micrograms/ml, 15.7 +/- 8.9, 2.2 +/- 1.6 times/24 h, respectively). Insulin doses (22.4 +/- 4.5 vs. 22.0 +/- 8.9 U/day), FPG (6.6 +/- 2.2 vs. 7.4 +/- 2.4 mmol/l), and HbA1c concentrations were not significantly different between the CIT and MIT groups. M-values significantly correlated with 1,5-AG concentrations (r = 0.414, P < 0.05), but not with HbA1c concentrations. CONCLUSIONS--The findings suggest that the plasma 1,5-AG concentration can be a useful index of the daily excursion of blood glucose, especially in patients with well-controlled NIDDM.

CT Check Tags: Comparative Study; Female; Human; Male
*Biological Markers: BL, blood
***Blood Glucose: ME, metabolism**
***Deoxyglucose: BL, blood**
*Diabetes Mellitus, Type II: BL, blood
**Diabetes Mellitus, Type II: DH, diet therapy**
Diabetes Mellitus, Type II: DT, drug therapy
**Diabetic Diet**
Drug Administration Schedule
Hemoglobin A, Glycosylated: AN, analysis
Hypoglycemic Agents: TU, therapeutic use
Insulin: AD, administration & dosage
*Insulin: TU, therapeutic use
Isomerism
Middle Aged
Regression Analysis

RN 11061-68-0 (Insulin); 154-17-6 (Deoxyglucose); **154-58-5 (1,5-anhydroglucitol)**

CN 0 (Biological Markers); 0 (Blood Glucose); 0 (Hemoglobin A, Glycosylated); 0 (Hypoglycemic Agents)

L86 ANSWER 4 OF 16 MEDLINE on STN
AN **94295683** MEDLINE
DN PubMed ID: **8023926**
TI Glucose transport with brief dietary **restriction**: heterogenous responses in muscles.
AU Cartee G D; Dean D J
CS Biodynamics Laboratory, University of Wisconsin-Madison 53706.
NC AG-10026 (NIA)
SO American journal of physiology, **(1994 Jun)** 266 (6 Pt 1) E946-52.
Journal code: 0370511. ISSN: 0002-9513.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199407
ED Entered STN: 19940815

Last Updated on STN: 19940815
Entered Medline: 19940729

AB The time course (1, 5, or 20 days) for the effect of dietary **restriction** (DR; approximately 25% reduction below ad libitum intake) on epitrochlearis and flexor digitorum brevis (FDB) muscle glucose transport activity was studied in female Fischer 344 rats (8 mo old). Epitrochlearis glucose transport activity with 100 microU/ml insulin was increased by 38% after 5 days of DR ($P < 0.05$) despite no change in glucose transport activity with 0 or 20,000 microU/ml insulin. The increase with 100 microU/ml insulin was not further enhanced by 20 days of DR. DR did not result in a significant increase in the glucose transport activity of the FDB with 0, 100, or 20,000 microU/ml insulin. Abdominal fat content was significantly ($P < 0.01$) reduced below ad libitum levels only after 20 days of DR. These results demonstrate that DR-induced improvement in epitrochlearis glucose transport activity with a physiological insulin concentration can occur very rapidly, preceding detectable changes in basal or maximal insulin-stimulated glucose transport activity or abdominal fat pad mass, and the enhancement of insulin action does not occur simultaneously in all muscles.

CT Check Tags: Female; Support, U.S. Gov't, P.H.S.
**3-O-Methylglucose**
Adipose Tissue: AH, anatomy & histology
Animals
Biological Transport
**Blood Glucose: AN, analysis**
Body Weight
***Diet**
Elbow
***Glucose: ME, metabolism**
Glycogen: ME, metabolism
Insulin: BL, blood
Methylglucosides: PK, pharmacokinetics
Muscles: AH, anatomy & histology
*Muscles: ME, metabolism
Organ Weight
Rats
Rats, Inbred F344
Toes

RN 11061-68-0 (Insulin); **146-72-5 (3-O-Methylglucose)**; **50-99-7 (Glucose)**; 9005-79-2 (Glycogen)

CN 0 (Blood Glucose); 0 (Methylglucosides)

L86 ANSWER 5 OF 16 MEDLINE on STN
AN **94262895** MEDLINE
DN PubMed ID: **8203618**
TI Adaptation of muscle glucose transport with caloric **restriction** in adult, middle-aged, and old rats.
AU Cartee G D; Kietzke E W; Briggs-Tung C
CS Biodynamics Laboratory, University of Wisconsin-Madison 53706.
NC AG-10026 (NIA)
SO American journal of physiology, **(1994 May)** 266 (5 Pt 2) R1443-7.
Journal code: 0370511. ISSN: 0002-9513.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Space Life Sciences
EM 199407
ED Entered STN: 19940714
Last Updated on STN: 19940714
Entered Medline: 19940705

AB The effects of prolonged caloric **restriction** (60% of ad libitum intake initiated at 14 wk of age) on glucose transport activity in isolated epitrochlearis muscles were studied in female Fischer 344 rats

aged 8, 18, and 23 mo. Basal **3-O-methylglucose** transport (3-MG) rate (without insulin) was not significantly altered by caloric **restriction.** With a submaximally effective insulin concentration (75 microU/ml), 3-MG transport was enhanced in the caloric-**restricted** groups by 59, 59, and 105% at 8, 18, and 23 mo of age, respectively. With a maximally effective insulin concentration (20,000 microU/ml), 3-MG transport was increased after caloric **restriction**, despite no change in muscle GLUT4 glucose transporter protein content. These results indicate that chronic caloric **restriction** enhances insulin stimulation of the glucose transport system independent of changes in basal glucose transport or muscle GLUT4 levels, and insulin-stimulated glucose transport is enhanced in rats with chronic caloric **restriction** at least until 23 mo of age.

CT Check Tags: Comparative Study; Female; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
**3-O-Methylglucose**
*Aging: ME, metabolism
Animals
**Blood Glucose: ME, metabolism**
Body Weight
**Diet, Reducing**
***Energy Intake**
*Methylglucosides: ME, metabolism
*Monosaccharide Transport Proteins: ME, metabolism
Muscle Development
*Muscles: ME, metabolism
Muscles: PH, physiology
Organ Weight
Rats
Rats, Inbred F344
Reference Values

RN **146-72-5 (3-O-Methylglucose)**
CN 0 (Blood Glucose); 0 (GLUT-4 protein); 0 (Methylglucosides); 0 (Monosaccharide Transport Proteins)

L86 ANSWER 6 OF 16 MEDLINE on STN
AN **91271129** MEDLINE
DN PubMed ID: **2097613**
TI [Mechanism of action and applications for glucose analogs]. Mechanizm dzialania i zastosowanie analogow glukozy.
AU Torlinska T
CS Katedra i Zaklad Fizjologii Akademii Medycznej w Poznaniu.
SO Postepy higieny i medycyny doswiadczalnej, **(1990)** 44 (4-6) 299-325. Ref: 100
Journal code: 0421052. ISSN: 0032-5449.
CY Poland
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA Polish
FS Priority Journals
EM 199107
ED Entered STN: 19910811
Last Updated on STN: 19910811
Entered Medline: 19910725
AB The paper presents recent problems of the mechanism of the action of glucose analogs (especially 2-deoxy-D-glucose and **5-thio-D-glucose**) at the cellular level as well as their application in experimental and clinical medicine. It has been discussed, whether 2-DG and 5-TG could be assumed to represent nonmetabolizable antimetabolites of glucose.
CT Check Tags: Human

Animals
**Antimetabolites: PD, pharmacology**
**Deoxyglucose: PK, pharmacokinetics**
**Deoxyglucose: PD, pharmacology**
English Abstract
***Glucose: AA, analogs & derivatives**
**Glucose: PK, pharmacokinetics**
***Glucose: PD, pharmacology**
RN 154-17-6 (Deoxyglucose); **20408-97-3 (5-thio-D-glucose)**; **50-99-7 (Glucose)**
CN 0 (Antimetabolites)

L86 ANSWER 7 OF 16 MEDLINE on STN
AN **89252469** MEDLINE
DN PubMed ID: **2656341**
TI Plasma **1,5-anhydro-D-glucitol** as new clinical marker of glycemic control in NIDDM patients.
AU Yamanouchi T; Minoda S; Yabuuchi M; Akanuma Y; Akanuma H; Miyashita H; Akaoka I
CS Second Department of Internal Medicine, University of Teikyo, Tokyo, Japan.
SO Diabetes, **(1989 Jun)** 38 (6) 723-9.
Journal code: 0372763. ISSN: 0012-1797.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 198906
ED Entered STN: 19900306
Last Updated on STN: 19900306
Entered Medline: 19890627
AB To elucidate the value of using plasma **1,5-anhydro-D-glucitol** (AG) as a marker of glycemic control in diabetic patients, the relationship between the plasma concentration of AG and glucosuria was examined in 152 patients with non-insulin-dependent diabetes mellitus (NIDDM). After recovery from the deterioration of glycemic control in NIDDM patients had started, AG began to increase day by day. The recovery of plasma AG showed a constant linear increase curve when excellent glycemic control was attained. The ordinary daily recovery rate of plasma AG was estimated to be 0.3 microgram/ml, which was independent of body weight, sex, age, the difference in treatment, the duration of diabetes, or the level of plasma AG among NIDDM patients. This rate decreased according to the increase in urinary glucose. When we calculated the decrease rate of plasma AG (delta AG), assuming 0.3 microgram/day to be the maximum increase rate in a day, we found a high correlation between delta AG and urinary glucose at almost all AG levels except the normal range and observed that plasma AG (A) times urinary glucose (G) was relatively constant. The formula A x G = 16 is a simple equation for rough estimation of urinary glucose from the plasma AG concentration in a stable glycemic-controlled NIDDM patient, and we call it the A.G index. The plasma AG also correlated significantly with fasting plasma glucose (r = -.810) and glycosylated hemoglobin (r = -.856) in the same stable glycemic-controlled NIDDM patients. Based on these observations, we propose that plasma AG can serve as a new marker that may provide sensitive and analytical information about glycemic control.
CT Check Tags: Female; Human; Male; Support, Non-U.S. Gov't
Adult
Aged
*Biological Markers: BL, blood
**Blood Glucose: AN, analysis**
***Blood Glucose: ME, metabolism**

*Deoxy Sugars: BL, blood
***Deoxyglucose: BL, blood**
*Diabetes Mellitus, Type II: BL, blood
Diabetes Mellitus, Type II: DT, drug therapy
Diabetes Mellitus, Type II: UR, urine
**Fasting**
Glycosuria
Insulin: TU, therapeutic use
Middle Aged
Pregnancy
Pregnancy in Diabetics: BL, blood
RN 11061-68-0 (Insulin); 154-17-6 (Deoxyglucose); **154-58-5 (1,5-anhydroglucitol)**
CN 0 (Biological Markers); 0 (Blood Glucose); 0 (Deoxy Sugars)

L86 ANSWER 8 OF 16 MEDLINE on STN
AN **88222777** MEDLINE
DN PubMed ID: **3370460**
TI Contribution of fat metabolism to 'glucoprivic' feeding produced by fourth ventricular **5-thio-D-glucose.**
AU Tordoff M G; Flynn F W; Grill H J; Friedman M I
CS Monell Chemical Senses Center, Philadelphia, PA 19104.
NC AM-21397 (NIADDK)
AM-35014 (NIADDK)
NS-21833 (NINDS)
+
SO Brain research, **(1988 Apr 5)** 445 (2) 216-21.
Journal code: 0045503. ISSN: 0006-8993.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198806
ED Entered STN: 19900308
Last Updated on STN: 19970203
Entered Medline: 19880629
AB We examined whether manipulations of fat metabolism influence the feeding response to peripheral or central administration of **5-thio-D-glucose** (5-TG), a potent inhibitor of glucose utilization. The increase in food intake produced by peritoneal (50 mg/kg) or fourth ventricular (50, 100, 150 micrograms) 5-TG was potentiated by administration of the fatty acid oxidation inhibitor, methyl palmoxirate (10 mg/kg, p.o.). In addition, rats maintained on a high-fat diet ate less in response to fourth ventricular 5-TG (150 micrograms) than did rats maintained on an **equicaloric** low-fat diet. These results suggest that the feeding response to 'glucoprivation' is determined by the interaction of glucose and fat oxidation.
CT Check Tags: Male; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
Animals
Cerebral Ventricles: DE, drug effects
*Cerebral Ventricles: PH, physiology
**Diet**
*Dietary Fats: PD, pharmacology
Epoxy Compounds: PD, pharmacology
*Feeding Behavior: DE, drug effects
**Glucose: AD, administration & dosage**
***Glucose: AA, analogs & derivatives**
**Glucose: PD, pharmacology**
Hypoglycemic Agents: PD, pharmacology
Injections, Intraperitoneal
Injections, Intraventricular
Propionates: PD, pharmacology
Rats

Rats, Inbred Strains
Reference Values
RN **20408-97-3 (5-thio-D-glucose)**; **50-99-7 (Glucose)**; 69207-52-9 (methyl 2-tetradecylglycidate)
CN 0 (Dietary Fats); 0 (Epoxy Compounds); 0 (Hypoglycemic Agents); 0 (Propionates)

L86 ANSWER 9 OF 16 MEDLINE on STN
AN **84067384** MEDLINE
DN PubMed ID: **6358779**
TI Glucose concentration and insulin release in **5-thio-D-glucose**-treated mice.
AU Veeraragavan K; Ramakrishnan S
SO Metabolism: clinical and experimental, **(1983 Dec)** 32 (12) 1115-9.
Journal code: 0375267. ISSN: 0026-0495.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198401
ED Entered STN: 19900319
Last Updated on STN: 19900319
Entered Medline: 19840126
AB Male albino mice were given a single dose of various concentrations (25, 50, and 100 mg/kg body weight) of **5-thio-D-glucose** or daily infusions (33 mg/kg body weight) of **5-thio-D-glucose** for 21 days. Elevated blood glucose and immunoreactive insulin (IRI) levels were observed in the mice treated with **5-thio-D-glucose.** Fasting glucose levels reached a maximum in 30 minutes and IRI levels reached a maximum in 60 to 90 minutes in the single-dose treated animals compared to preintubation levels. In the mice treated for 21 days, the fasting and fed glucose and IRI levels were significantly increased. Single dose of glucose (1 g/kg body weight) given to fasting and fed mice did not alter the glucose and IRI levels in the treated animals. However, a single dose of **5-thio-D-glucose** (33 mg/kg body weight) given to fasting and fed treated animals increased the IRI levels significantly but not the glucose concentration. These data show that both single-dose and 3-week treatment with **5-thio-D-glucose** produced a hyperinsulinemic diabetes in male albino mice.
CT Check Tags: Male; Support, Non-U.S. Gov't
Animals
***Blood Glucose: ME, metabolism**
Body Weight
Dose-Response Relationship, Drug
**Fasting**
***Glucose: AA, analogs & derivatives**
**Glucose: PD, pharmacology**
Insulin: BL, blood
*Insulin: SE, secretion
Mice
Radioimmunoassay
Time Factors
RN 11061-68-0 (Insulin); **20408-97-3 (5-thio-D-glucose)**; **50-99-7 (Glucose)**
CN 0 (Blood Glucose)

L86 ANSWER 10 OF 16 MEDLINE on STN
AN 84005667 MEDLINE
DN PubMed ID: 6413290
TI Effects of luminal glucose versus nonnutritive infusates on jejunal mass

and absorption in the rat.
AU Richter G C; Levine G M; Shiau Y F
SO Gastroenterology, **(1983 Nov)** 85 (5) 1105-12.
Journal code: 0374630. ISSN: 0016-5085.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 198311
ED Entered STN: 19900319
Last Updated on STN: 19970203
Entered Medline: 19831123
AB These studies were designed to better understand the effects of luminal nutrition on intestinal mass and function. Parenterally nourished rats received a midjejunal infusion of either 0.9% saline, 10% glucose, 10% **3-O-methyl glucose**, or 30% glucose.
A fifth group underwent sham operation. After 7 days, intestinal mass and in vitro glucose and leucine uptake were measured in the intestine just distal to the infusion site. Luminal infusion led to greater intestinal mass in all groups compared to controls, but only the 10% and 30% glucose groups had significantly greater overall glucose uptake. Kinetic analysis revealed a greater apparent maximal transport rate in both glucose groups. The 30% glucose group had a greater apparent maximal transport rate for leucine and permeability for glucose and leucine. These data confirmed that "work load," in addition to luminal nutrition, maintains intestinal mass. However, adaptation of intestinal transport is more specific and appears to be regulated both by substrate metabolism and **caloric** density.
CT Check Tags: Male; Support, Non-U.S. Gov't; Support, U.S. Gov't, Non-P.H.S.
Animals
Biological Transport
Body Weight
Carbon Radioisotopes
**Energy Intake**
***Glucose: ME, metabolism**
Intestinal Absorption
*Jejunum: ME, metabolism
Kinetics
Leucine: ME, metabolism
Nitrogen: ME, metabolism
Osmolar Concentration
***Parenteral Nutrition**
***Parenteral Nutrition, Total**
Rats
Rats, Inbred Strains
RN **50-99-7 (Glucose)**; 61-90-5 (Leucine); 7727-37-9 (Nitrogen)
CN 0 (Carbon Radioisotopes)

L86 ANSWER 11 OF 16 MEDLINE on STN
AN **82265141** MEDLINE
DN PubMed ID: **7107401**
TI Energy and misonidazole toxicity: the effects of **5-thio -D-glucose.**
AU Skov K A; Korbelik M; Palcic B; Skarsgard L D
SO International journal of radiation oncology, biology, physics, **(1982 Mar-Apr)** 8 (3-4) 697-700.
Journal code: 7603616. ISSN: 0360-3016.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198210
ED Entered STN: 19900317

Last Updated on STN: 19900317
Entered Medline: 19821012

AB Cell inactivation and DNA damage (single-strand breaks) were used to study the effects of inhibitors of anaerobic glucose oxidation on the toxicity of misonidazole to hypoxic Chinese hamster cells. Citrate and 2-deoxyglucose produced no effects on the toxicity. **5-thio-D-glucose** (5-TG) protected cells of the CH2B2 line to some extent (SSB decreased by about 30%). In the CHO lines used (wild, and ethylmethanesulfonate-sensitive mutants), 5-TG had varied effects. Non-protein sulfhydryl (NPSH) levels were measured in all lines. Cells with lower NPSH levels are more sensitive to misonidazole; these are the cells which are protected by 5-TG. Cell line variations must be considered when studying interactions between a drug and other forms of treatment as possible treatments of cancer.

CT Check Tags: Support, Non-U.S. Gov't
Animals
**Antimetabolites: PD, pharmacology**
Cell Line
Cricetulus
Drug Interactions
*Energy Metabolism: DE, drug effects
***Glucose: AA, analogs & derivatives**
**Glucose: PD, pharmacology**
Hamsters
*Misonidazole: TO, toxicity
*Nitroimidazoles: TO, toxicity
Sulfhydryl Compounds: ME, metabolism

RN 13551-87-6 (Misonidazole); **20408-97-3 (5-thio-D-glucose)**; **50-99-7 (Glucose)**

CN 0 (Antimetabolites); 0 (Nitroimidazoles); 0 (Sulfhydryl Compounds)

L86 ANSWER 12 OF 16 MEDLINE on STN
AN **82201194** MEDLINE
DN PubMed ID: **6805137**
TI [The fate of intravenously-administered sugar as energy source (author's transl)].
Das Schicksal intravenos als Energietrager verabreichter Zucker.
AU Gottinger E; Hagmuller K; Hellauer H
SO Wiener klinische Wochenschrift, **(1981 Dec 25)** 93 (24) 755-60.
Journal code: 21620870R. ISSN: 0043-5325.
CY Austria
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 198207
ED Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19820708

AB 10 micromoles of 14C-U-labelled maltose, glucose, fructose and galactose were injected intravenously into rats and it was found that more than 10% was exhaled as CO2 within 60 minutes and about 50% within 24 hours. Anaesthesia lowers the values by one third. The main amount of 14C is found in the liver. By comparison, only 0.24% and 0.17% were metabolized to CO2 within 60 minutes from sucrose and lactose respectively, whilst within 24 hours the equivalent figures were 2% and 3%. This small turnover persists after removal of the gut, as was demonstrated by an additional series of 1-hour experiments and is judged to signify parenteral hydrolysis of sucrose and lactose molecules. For both disaccharides the 1-hour renal excretion ranges from 66% to almost 100% compared with a range of 1.2% to 4.3% for glucose, maltose, fructose and galactose. Using **3-O-methylglucose**, only 0.025% of the dose was exhaled as CO2 within 60 minutes, a quantity small enough to be due to contamination of the sample. Apart from glucose and

fructose, maltose is considered to be useful for parenteral nutrition.
CT Check Tags: Female
Animals
Energy Metabolism
English Abstract
Fructose: ME, metabolism
**Glucose: ME, metabolism**
Injections, Intravenous
Liver: ME, metabolism
Maltose: ME, metabolism
**Parenteral Nutrition**
Polysaccharides: AD, administration & dosage
*Polysaccharides: ME, metabolism
Rats
Respiration
RN 30237-26-4 (Fructose); **50-99-7 (Glucose)**; 69-79-4 (Maltose)
CN 0 (Polysaccharides)

L86 ANSWER 13 OF 16 MEDLINE on STN
AN 81225840 MEDLINE
DN PubMed ID: 6264602
TI Glucoreceptors controlling feeding and blood glucose: location in the hindbrain.
AU Ritter R C; Slusser P G; Stone S
NC AM20035 (NIADDK)
SO Science, **(1981 Jul 24)** 213 (4506) 451-2.
Journal code: 0404511. ISSN: 0036-8075.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198108
ED Entered STN: 19900316
Last Updated on STN: 19970203
Entered Medline: 19810827
AB Microinfusion of **5-thioglucose** into either the lateral or fourth cerebral ventricle caused increased feeding and hyperglycemia in rats when the cerebral aqueduct was unobstructed. If the aqueduct was obstructed and **5-thioglucose** was infused into the fourth ventricle, increased feeding and hyperglycemia persisted, whereas feeding and hyperglycemia in response to lateral ventricle infusion were abolished. Drinking in response to infusion of angiotensin II into the lateral ventricle was not diminished by aqueduct obstruction. These results indicate that glucoreceptors that mediate feeding and hyperglycemia in response to cerebral glucoprivation are located in the caudal hindbrain and not in the hypothalamus where they have previously been sought.
CT Check Tags: Male; Support, U.S. Gov't, P.H.S.
Animals
***Blood Glucose: ME, metabolism**
*Cerebral Ventricles: PH, physiology
**Energy Intake**
*Feeding Behavior: DE, drug effects
***Glucose: AA, analogs & derivatives**
**Glucose: ME, metabolism**
**Glucose: PD, pharmacology**
Rats
Receptors, Cell Surface: DE, drug effects
*Receptors, Cell Surface: PH, physiology
RN **20408-97-3 (5-thio-D-glucose)**; **50-99-7 (Glucose)**
CN 0 (Blood Glucose); 0 (Receptors, Cell Surface); 0 (glucose receptor)

L86 ANSWER 14 OF 16 MEDLINE on STN

AN **80136088** MEDLINE
DN PubMed ID: **535913**
TI Cytotoxicity of glucose analogues in V79 multicell spheroids.
AU Sridhar R; Stroude E C; Inch W R
SO In vitro, **(1979 Sep)** 15 (9) 685-90.
Journal code: 0063733. ISSN: 0073-5655.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198005
ED Entered STN: 19900315
Last Updated on STN: 19900315
Entered Medline: 19800530
AB 2-Deoxy-D-glucose (2DG) and **5-thio-D-glucose** (5TG) are glucose antimetabolites that are known to be selectively toxic to hypoxic cells grown as single cells or as monolayer cultures. These analogues were toxic to Chinese hamster V79 cells grown as multicell spheroids even under aerobic conditions. When spheroids, 500- to 600-microns diameter, were exposed to 7.5 mM of these chemicals for 3 days, the number of clonogenic cells per spheroid dropped to 50% for **5-thio-D-glucose** and 20% for 2-deoxy-D-glucose, relative to control values. Survivals were reduced to less than 1% when the experiment was repeated in glucose-free medium. Scanning electron photomicrographs of spheroids treated with 7.5 mM of either analogue showed extensive damage to the outer cells. The cell killing observed was much more than could be predicted on the basis of the hypoxic fraction known to be present in these spheroids. The crowded tumor-like environment may make the cells vulnerable to the cytotoxic action of glucose analogues and other glycolytic inhibitors.
CT Check Tags: Comparative Study
Animals
***Antimetabolites: PD, pharmacology**
Cell Count
*Cell Division: DE, drug effects
Cell Line
*Cell Survival: DE, drug effects
Cricetulus
*Deoxy Sugars: PD, pharmacology
***Deoxyglucose: PD, pharmacology**
***Glucose: AA, analogs & derivatives**
**Glucose: PD, pharmacology**
Hamsters
Lung
Microscopy, Electron, Scanning
Oxygen
Partial Pressure
Temperature
RN 154-17-6 (Deoxyglucose); **50-99-7 (Glucose)**; 7782-44-7 (Oxygen)
CN 0 (Antimetabolites); 0 (Deoxy Sugars)

L86 ANSWER 15 OF 16 MEDLINE on STN
AN **73010408** MEDLINE
DN PubMed ID: **5074020**
TI Modulation of the feeding response to peripheral insulin, 2-deoxyglucose or **3-O-methyl glucose** injection.
AU Booth D A
SO Physiology & behavior, **(1972 Jun)** 8 (6) 1069-76.
Journal code: 0151504. ISSN: 0031-9384.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals

EM 197211
ED Entered STN: 19900310
Last Updated on STN: 19970203
Entered Medline: 19721119
CT Check Tags: Male
Adrenal Medulla: PH, physiology
**Animal Nutrition**
Animals
**Blood Glucose**
Circadian Rhythm
Epinephrine: SE, secretion
*Feeding Behavior: DE, drug effects
Food Deprivation
Gastric Juice: SE, secretion
**Glucose: ME, metabolism**
***Glucose: PD, pharmacology**
Injections, Intraperitoneal
Injections, Subcutaneous
*Insulin: PD, pharmacology
Rats
Satiation
Vagotomy
Vagus Nerve: PH, physiology
RN 11061-68-0 (Insulin); **50-99-7 (Glucose)**; 51-43-4 (Epinephrine)
CN 0 (Blood Glucose)

L86 ANSWER 16 OF 16 MEDLINE on STN
AN **70001342** MEDLINE
DN PubMed ID: **4980827**
TI Absorption and effect of ingested **mannoheptulose.**
AU Anonymous
SO Nutrition reviews, **(1969 Jul)** 27 (7) 206-8. Ref: 8
Journal code: 0376405. ISSN: 0029-6643.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LA English
FS Priority Journals
EM 196911
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19691126
CT Check Tags: Human
Animals
***Blood Glucose**
**Diet**
Dogs
Haplorhini
Heptoses: ME, metabolism
*Heptoses: PD, pharmacology
Heptoses: TU, therapeutic use
Heptoses: UR, urine
Hypoglycemia: DT, drug therapy
Insulin: BI, biosynthesis
*Insulin: BL, blood
Insulin: SE, secretion
Intestinal Absorption
Ketones: ME, metabolism
Ketones: TU, therapeutic use
Rabbits
Rats
Stimulation, Chemical
Time Factors

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RN   11061-68-0 (Insulin)
CN   0 (Blood Glucose); 0 (Heptoses); 0 (Ketones)


=> d his

     (FILE 'HOME' ENTERED AT 14:02:52 ON 27 MAR 2004)
               SET COST OFF

     FILE 'HCAPLUS' ENTERED AT 14:03:00 ON 27 MAR 2004
               E PITHA J/AU
L1          238 S E3,E8-E10
               E ROTH G/AU
L2          520 S E3-E14,E27-E37
L3            1 S E54
L4            1 S US20020035071/PN OR US97-889877#/AP,PRN
L5            1 S L1-L3 AND L4
L6          611 S MANNOHEPTULOSE OR MANNO HEPTULOSE
L7          176 S 5 THIO D GLUCOSE
L8          239 S 5 THIO (1W) GLUCOSE OR 5 THIOGLUCOSE
L9         1619 S 3 O () (METHYLGLUCOSE OR METHYL GLUCOSE)
L10         178 S 1 5 ANHYDRO D GLUCITOL
L11         184 S 1 5 ANHYDRO (1W) GLUCITOL
L12         231 S 1 5 ANHYDROGLUCITOL
L13           4 S 1 5 ANHYDRO GLUCITOL
L14          55 S 2 5 ANHYDRO D GLUCITOL
L15          57 S 2 5 ANHYDRO (1W) GLUCITOL
L16           7 S 2 5 ANHYDROGLUCITOL
L17           0 S 2 5 ANHYDRO GLUCITOL

     FILE 'REGISTRY' ENTERED AT 14:08:49 ON 27 MAR 2004

     FILE 'REGISTRY' ENTERED AT 14:08:59 ON 27 MAR 2004
L18           5 S 654-29-5 OR 20408-97-3 OR 146-72-5 OR 154-58-5 OR 41107-82-8

     FILE 'HCAPLUS' ENTERED AT 14:10:57 ON 27 MAR 2004
L19        2664 S L18
L20          10 S MANNOKETOHEPTOSE OR MANNO()(KETOHEPTOSE OR KETO HEPTOSE) OR M
L21         168 S NSC170119 OR NSC129241 OR NSC204984 OR NSC()(170119 OR 170 11
L22          10 S 1 5 ()(ANHYDROSORBITOL OR ANHYDRO SORBITOL)
L23         178 S 2 5()(ANHYDROMANNITOL OR ANHYDRO D MANNITOL OR ANHYDRO (1W) M
L24        4236 S L6-L17,L19-L23
L25           1 S L1-L5 AND L24

     FILE 'REGISTRY' ENTERED AT 14:15:24 ON 27 MAR 2004
L26           1 S 50-99-7
                SEL RN L18
L27          17 S E1-E5/CRN

     FILE 'HCAPLUS' ENTERED AT 14:16:15 ON 27 MAR 2004
L28      165562 S L26
L29        2208 S L24 AND L28
L30          30 S L24 (L) THU/RL AND L29
L31         112 S (FOOD? OR FEED? OR NUTRI?)/SC,SX AND L29
L32           2 S L30 AND L31

     FILE 'REGISTRY' ENTERED AT 14:17:55 ON 27 MAR 2004
L33           1 S 3615-44-9
L34           3 S C7H14O7/MF AND MANNOHEPTULOSE
L35           2 S L33,L34 NOT L18

     FILE 'HCAPLUS' ENTERED AT 14:18:57 ON 27 MAR 2004
L36          91 S L35 AND L28
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L37           1 S L35 (L) THU/RL AND L36
L38           7 S L36 AND (FOOD? OR FEED? OR NUTRI?)/SC,SX
L39         140 S L32,L37,L38,L30,L31
L40           1 S L1,L2 AND L24,L35
L41          98 S L39 AND (PD<=19970708 OR PRD<=19970708 OR AD<=19970708)
L42          42 S L41 AND (FEEDING OR GASTRIC OR DIABET? OR INDUCTION OR GLUCOS
                SEL DN AN 1 3 4 7 9 12 13 14 16 18 22 23 28 38 42
L43          15 S L42 AND E6-E53
L44          15 S L40,L43
L45          16 S L32,L44
                E HYPOTHERMIA/CT
                E E3_ALL
                E HYPOTHERMIA/CT
                E E3+ALL
L46        5547 S E2
                E E5+ALL
L47          65 S E2
                E E4+ALL
                E E4+ALL
L48        7757 S E3
                E E11+ALL
L49         602 S E1
                E E6+ALL
L50        1602 S E2+NT
L51           6 S L29 AND L46-L50
                SEL DN AN 1 5 6
L52           3 S E1-E9
L53          18 S L45,L52 AND L1-L17,L19-L25,L28-L32,L36-L52
L54          18 S L53 AND (?GLUCOSE? OR ?MANNO? OR ?GLUCITOL? OR ?SORBITOL? OR
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 14:47:38 ON 27 MAR 2004
L55           7 S E10-E16

     FILE 'REGISTRY' ENTERED AT 14:47:56 ON 27 MAR 2004

     FILE 'HCAPLUS' ENTERED AT 14:48:05 ON 27 MAR 2004

     FILE 'MEDLINE' ENTERED AT 14:49:18 ON 27 MAR 2004
L56        1570 S L18,L33,L35
L57        2797 S L6-L17,L20-L23 OR 3(1W)(METHYLGLUCOSE OR METHYL GLUCOSE OR ME
L58        2797 S L56,L57
L59        2332 S L58 AND PY<=1997
L60       93714 S L26
L61       87177 S GLUCOSE/CT
L62        1205 S L59 AND L60,L61
L63           8 S L62 AND ?CALORI?
                E BLOOD GLUCOSE/CT
L64         248 S E3+NT AND L59
L65        1341 S L62,L64
L66          18 S L65 AND RESTRICT?
                SEL DN AN 1 3 4 17
L67           4 S E1-E8
                E DIET/CT
                E E3+ALL
L68       99071 S E8+NT
                E E7+ALL
L69      166350 S E5+NT
L70          38 S L65 AND L68,L69
                E DIET, REDUCING/CT
                E E3+ALL
L71       41260 S E4+NT
L72       66493 S E3+NT
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L73           10 S L65 AND L71,L72
L74           46 S L67,L70,L73 AND L56-L73
L75            7 S L74 NOT AB/FA
                 SEL DN AN 5 7
L76            2 S E1-E4 AND L75
L77           39 S L74 NOT L75
                 SEL DN AN 2 5 7 9 10 14 17 26 30
L78            9 S E5-E22
L79           11 S L76,L78
L80          303 S L65 AND ANTIMETABOLITES+NT/CT
L81            9 S L80 AND ANTIMETABOLITES/CT
                 SEL DN AN 4 8 9
L82            3 S E23-E28
L83           14 S L79,L82 AND L56-L82
                 E CALORIC RESTRICTION/CT
                 E E3+ALL
L84       18137 S E13+NT
L85           3 S L84 AND L65
L86          16 S L83,L85 AND L56-L85

     FILE 'MEDLINE' ENTERED AT 15:04:38 ON 27 MAR 2004

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